



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

**NOTES AND DESCRIPTIONS OF HYMENOPTERA
FROM THE WESTERN UNITED STATES.**

In the collection of the University of Kansas.*

BY H. L. VIERECK, ACAD. NAT. SCI., PHILA., PA.

The species are arranged systematically under the State or Territory in which they were found.

TENTHREDINOIDEA and SIRICOIDEA.

For the arrangement of genera, the determination of certain species and for other useful assistance in these superfamilies, the writer is indebted to Dr. A. D. MacGillivray.

Unless otherwise mentioned the specimens were collected by Prof. F. H. Snow.

KANSAS.

TENTHREDINOIDEA.

Macroxyela ferruginea Say.

Hamilton Co. (S. J. Hunter).

Emphytus apertus Nort.

Douglas Co., Aug. (E. S. Tucker).

Emphytus inornatus Say.

Douglas Co., 900 ft., June (U. of K. coll., lot 57).

Harpiphorus tarsatus Say.

Rock Cr., Douglas Co., 900 ft.

Tenthredopsis atrovioleacea Nort.

Douglas Co., 900 ft.

Macrophya intermedia Nort.

Douglas Co., 900 ft., May. I doubt whether *succinta* of Cresson is specifically distinct from this species.

Macrophya pulchella Klug.

Douglas Co., 900 ft., May (U. of K. coll., lot 29).

One specimen has the coxæ partly yellow.

Another specimen has the lanceolate cell partially petiolate.

* Continued from Biological Papers, Kansas Academy of Sciences, 1905.

Macrophya tibiator Nort.

Same date and lot as the preceding number. Has white spot on coxæ as in Texan specimens of this species.

Zarea americana Cress.

Douglas Co., April.

Trichiosoma triangulum Kby.

Oregon Cascades.

Blennocampa pygmæa Say.

Douglas Co., June (U. of K. coll., lot 57).

Hylotoma humeralis Beauv.

Douglas Co., 900 ft.

Schizocerus plumiger Klug.

Clark Co., 1962 ft., May.

Schizocerus zabriskii Ashm.

Douglas Co. One (F. H. Snow); another taken in August by E. S. Tucker.

Schizocerus invita Cress ?

This specimen from Clark Co., 1962 ft., taken in June, may prove to be a new species. Dr. MacGillivray doubtfully refers it to *invita* Cress.

Acardulecera dorsalis Say.

Douglas Co., 900 ft., June and July (E. S. Tucker, U. of K., lots 46, 57, 655. Dr. MacGillivray remarks that several species are included under this name, species that can only be separated when the genus is fully studied and revised.

SIRICOIDEA.

Tremex columba Linn.

Douglas Co., 900 ft., October (E. S. Tucker).

PENNSYLVANIA.

TENTHREDINOIDEA.

Pamphilius ocreata Say.

Jeannette (H. G. Klages).

Strongylogaster apicalis Say.

Jeannette (H. G. Klages).

Selandria obsoleta Nort.

Indiana.

Selandria diluta Cress.

Jeannette (H. G. Klages).

Dolerus similis Nort.

Jeannette (H. G. Klages).

Macrophya albomaculata Nort.

Jeannetts (H. G. Klages).

Hylotoma humeralis Beauv.

Jeannette (H. G. Klages).

Acordulecera dorsalis Say.

Indiana.

ARIZONA.

TENTHREDINOIDEA.

Selandria media Nort.

Oak Creek Canyon, Aug., 1902.

Pristiphora siskiyouensis Marl. ♂.

Oak Creek Canyon, Aug., 1902.

COLORADO.

TENTHREDINOIDEA.

Tenthredo montanus Prov.

Estes Park, July, 1892.

Trichiosoma triangulum Kby.

♂ var. with the abdomen ferruginous. Estes Park, Aug., 1892.

Gymnonychus appendiculatus Htg.

Colorado Springs, 5915 ft. (E. S. Tucker).

MISSOURI.

TENTHREDINOIDEA.

Tenthredo tardus Nort.

Kansas City, Sept., 1892 (Harvey).

NEW MEXICO.

TENTHREDINOIDEA.

Tenthredo nupera Cress.

Magdalena.

Tenthredo xanthus Nort.

Magdalena Mts., July, 1894.

Pteronus trilineatus Nort.

Magdalena Mts. One taken in Aug., 1894.

Atomocera ruficollis Nort.

Magdalena Mts., Aug., 1894.

SIRICOIDEA.

Sirex albicornis var. **california** Nort.

Magdalena, Magdalena Mts., Aug., 1904.

Sirex fulvovs Cress.

Magdalena Mts., July, 1894.

WYOMING.

TENTHREDINOIDEA.

Pteronus kœbeleii Marl.

Twelve miles northwest of Lusk, July, 1895 (U. of K., lot 478).

Schizocerus plumiger Klug.

Forty miles north of Lusk, July, 1895 (U. of K., lot 48).

Schizocerus abdominalis Cress.

Forty miles north of Lusk, July, 1895 (U. of K., lots 423, 418, 415, respectively).

KANSAS.

ICHNEUMONIDEA.

Melanobracon ulmicola n. sp.

This species has been confused with *simplex*, from which it differs in the margined, very acute, triangular area of the second abdominal segment.

♀.—9 mm.—*Head*.—Shining and polished, and as usual apparently devoid of sculpture; scape about as long as the first and second joints of the flagellum combined, these latter joints subequal, the first joint a little longer than the second, pedicellum about half as long as the first joint of the flagellum, antennæ fifty-five jointed.

Thorax.—Smooth and polished, with the parapsidal grooves deeply impressed on the anterior half of the dorsulum; wings almost completely fuscous, the stigma very dark brown, the nervures dark brown but somewhat paler than the stigma, first submarginal cell with the membrane partly whitish, the third dis-

coidal cell with a whitish spot contiguous with the cubitus and recurrent nervure at their junction, first discoidal cell with a short petiole not longer than the pedicellum, recurrent nervure received by the cubitus a little before the first transverse cubitus—almost interstitial, first abscissa of the radius a little less than half the length of the second abscissa, which latter is about twice the length of the first or second transverse cubitus.

Abdomen.—Chiefly smooth and polished, the second segment with the triangular raised space having a very acute apical angle that almost attains the posterior margin, on each side of this triangular area the abdomen is for a short distance somewhat wrinkled; ovipositor about 2 mm. longer than the head, thorax and abdomen together.

Black; abdomen rather ferruginous, ovipositor brown, sheaths thereof black.

♂.—7 mm.—Differs from the female in having the second segment of the abdomen more wrinkled, with the wrinkles forming striæ, the first segment as in the female, rather striate.

Type.—University of Kansas.

Type locality, Douglas Co., Kansas.

One paratype from the type locality, differing only in the length which is 7 mm.

These specimens were collected on elm trees, where the females were caught in the act of ovipositing through the bark infested with beetles.

***Dinotrema signifrons* n. sp.**

Derives its name from an elongate medial oval convex elevation on the face extending from the antennal fovea to about half way down the face.

♂.—2.5 mm.—*Head*.—Black, smooth and highly polished; clypeus almost simular, convex and smooth, with an entire rounded edge; mandibles pale brown, the teeth with blackish edges, tridentate, the teeth subequal, the largest tooth, which is rather blunt, being on the upper margin, the middle tooth very sharp, the lower tooth shortest and rather blunt; antennæ twenty-four jointed, the scape and pedicellum pale, testaceous, as is the basal portion of the first joint of the flagellum, the joints subequal and very dark brown, the first joint distinctly but only a little longer than the second.

Thorax.—Black, smooth and polished in the same way as the head; the mesopleura divided transversely by a crenulate groove nearly as long as the tergite; metanotum almost uniformly rugulose, the pleura of the metathorax smooth and polished; wings hyaline, the nervures testaceous, rather tinted with fuscous, the stigma and costal margin darker than the remaining nervures; second submarginal cell pentangular, the second abscissa of the cubitus, which is about half the length of the second transverse cubitus, making a right angle with the third abscissa, posterior wings with the submedian cell a little more than half the length of the median cell; legs uniformly testaceous, the claws brown.

Abdomen.—Chiefly black, the first segment reddish testaceous, rather dullish

and with longitudinal elevations, the following segments smooth and shining, the second segment largely testaceous, only the lateral margins brownish, the succeeding segments more or less faintly inclining to testaceous in the middle.

Type.—University of Kansas.

Type locality.—Lawrence, Kansas.

One specimen taken at night, June (E. S. Tucker).

Aphæreta delosa Vier.

Two ♀ taken at twilight in August and June (E. S. Tucker).

Limnerium perdistincta Vier.

Male taken at night, April, Lawrence, Kansas (E. S. Tucker). Differs from the type as follows: antennæ thirty jointed; posterior femora blackish at extreme base and apex, posterior tibiæ with the apical third and nearly all of the basal third blackish, the middle third and a little of the basal third adjoining the middle third largely yellow, the abdominal segments are colored much the same as in the ♀, but the apical segments have more of black than ferruginous, the latter color being tinged with testaceous and confined to triangular areas on the sides of the dorsal segments.

Male taken at twilight, August, Lawrence, Kansas (E. S. Tucker). Differs from the type as follows: antennæ thirty jointed; eyes distinctly metallic green; scape and pedicellum brownish; the areola of the metanotum is shorter, with the lateral carinæ broken below the middle.

Limnerium lawrencei n. sp.

Very like *L. ? nephelodes* Ashm. in color.

♀.—7 mm.—Head—*Very finely sculptured; the face finely granular and dull, covered with white pubescence, which is not sufficiently abundant to obscure the sculpture; the cheeks not as broad as the eye, a little narrower, and the rest of the head, excepting the mandibles and mouth-parts, black; antennæ black, thirty-five jointed, the first joint of the flagellum as long as the scape and pedicellum together, and a little longer than the second joint; mandibles yellow, tipped with brown; palpi whitish.*

Thorax.—*Very like the head in sculpture, black; the dorsulum and metathorax dull like the face, the pleura more shining like the cheeks; metathorax with distinct raised lines and almost completely areolated, the areola not distinctly separated from the petiolarea, a little more than twice as long as the greatest width, granular and separated from the postscutellum by a nearly quadrate area, the basal area, the sides of the areola are angled at the upper third, external and external median areas confluent, angular area not well defined, almost taken up by the internal area, spiracular area and middle pleural areas confluent, the spiracular area partially separated by a raised line connecting the spiracle with the pleural carina; wings clear,*

the nervures dark brown, the stigma testaceous, tinted with brown, the extreme bases of the wings are yellow, as are the tegulæ, areolet petiolate, the petiole as long as the shortest side of the areolet; legs almost entirely ferruginous, including the coxæ, trochanters, except those of the posterior legs, yellow, anterior and middle legs with the apical tarsal joints and the claws more or less yellow; the tibia of posterior legs yellowish brown, broadly brownish at base and apex, the tarsi of the legs uniformly brown, except the metatarsus which is whitish at base.

Abdomen.—Almost equally ferruginous and black; petiole except a partial narrow apical band, basal third of the disc of the second segment and nearly all of the basal half of the sides the same, band occupying basal fourth of the third abdominal segment, a narrow band on disc of the fourth abdominal segment at apex, the fifth segment, except nearly half of the sides, all of the sixth and seventh segments and the sheaths, black; ovipositor a little less than half the length of the abdomen.

Type.—University of Kansas.

Type locality.—Lawrence, Kansas.

One ♀ taken at night in May, by E. S. Tucker.

***Limnerium vigilis* n. sp.**

In color this is very like *L. eurycreonotis*, of which it may prove to be the male.

♂.—8 mm.—Similar to the preceding species in the italicized characters.

Head.—Antennæ thirty-seven jointed.

Thorax.—Dorsulum dull like the face, the metathorax rather shining; areola distinctly separated from the petiolarea, nearly twice as long as wide, the lower half forming a square, the upper half nearly triangular, the apex of the triangle being narrowly truncated, *i. e.* the basal transverse carina is about one-third the length of the apical transverse carina, basal area transversely wrinkled, parallel sided and twice as long as wide or nearly, the areola and basal area together shorter than half the length of the metathorax from postscutellum to apex, petiolarea rather strongly and somewhat transversely wrinkled, external area imperfectly separated from the external median area by a faint incomplete line, the two latter areas nearly smooth, delicately wrinkled, the internal area obliquely wrinkled, the wrinkles about as coarse as in the petiolarea, but more separated, angular area almost reduced and lunate, spiracular area and middle pleural area dull granular, the metapleura almost punctate, rather tessellate, partly shining, partly dull; petiole of the areolet a little shorter than the shortest side of the areolet; legs vari-colored, the anterior and middle coxæ black, with the greater part of the apical half ferruginous, posterior coxæ black, with a narrow margin of rufous at apex, anterior and middle trochanters yellow, posterior trochanters with the proximal joint blackish and ferruginous, the distal joint yellow, all the femora ferruginous, the posterior pair darkest, tibiæ much like the femora, only the posterior tibiæ are brownish beneath, with an indistinct band of brown near the base, tarsi brownish, especially those of the posterior legs, those of the middle and anterior legs being yellowish, claws dark brown.

Abdomen.—Black, nearly all of the apical third of the second dorsal segment,

apical half of the third dorsal segment and more on the sides thereof, all of the fourth dorsal segment, more or less of the sides and apical third of the succeeding dorsal segments more or less distinctly ferruginous.

Type.—University of Kansas.

Type locality.—Lawrence, Kansas.

One ♀ taken at night in May, by E. S. Tucker.

***Idecthis biconjunctus* n. sp.**

Closely related to *Limnerium conjunctus* Cress., from which it differs in the areola, which is separated from the petiolarea, in the angular area, color, etc.

♂.—6 mm.—*Head* as in *Limnerium lawrencei*, except as follows: antennæ thirty-two jointed; cheeks as wide or very nearly as wide as the eye.

Thorax.—With characters italicized in *L. lawrencei*, excepting the petiole of the areolet, which is only about half the length of the shortest side of the areolet; basal area almost an acute angled triangle, nearly twice as long as wide at base, areola pentangular, nearly twice as long as wide, the lower half almost quadrate, finely granular and shining, the sides angled a little below the middle, petiolarea a little more than twice as long as the greatest width, the sides angled in the middle, the surface rather strongly transversely rugulose and shining, external and external median areas finely granular and dullish, separated by a rather distinct raised line angled near the middle, internal and angular areas rugose, the angular area lunate and small, inconspicuous; anterior and middle coxæ black at base, greater part reddish, posterior coxæ black, with a narrow margin of reddish at apex, anterior and middle legs with yellow trochanters, proximal trochanter of posterior legs brownish and black, the distal trochanter yellowish, otherwise the anterior and middle legs are more or less reddish testaceous, the tibiæ rather yellowish, the tarsi brownish, posterior femora ferruginous, the tibiæ of posterior legs dark brown at base, and apex pale brown between, rather yellowish brown beneath, the posterior tarsi brownish.

Abdomen.—Black, dorsally the apical fourth of the second segment a little more the half of the third segment and all of the fourth segment are ferruginous, at least two-thirds of the venter yellow.

Type.—University of Kansas.

Type locality.—Lawrence, Kansas.

One specimen taken at night in May, by E. S. Tucker.

***Amorphota angusta* n. sp.**

Very like *Limnerium montanus* Cress., from which it can be distinguished by the sessile areolet and the larger basal area.

♀.—7 mm.—*Head*.—Nearly as in *L. lawrencei*, the cheeks, however, not more than half the width of the eye and the antennæ thirty-three jointed.

Thorax.—With characters like those italicised in the description of *L. lawrencei*, with the following exceptions: stigma light brown, the areolet quadrangular, nearly quadrate; basal area smooth and shining, nearly quadrate, about as large

as the areolet, areola confluent, with the petiolarea only its upper margins normally placed and almost forming the arc of a semicircle, the areola and petiolarea together forming a tolerably deep strongly margined broad furrow that is shining and transversely rugulose, distinctly transversely striate near the apex, external area granular, distinctly separated from the external median area which is almost rugose, the internal area apparently confluent with the angular area and rugose; anterior and middle coxæ almost entirely yellowish to testaceous, posterior coxæ almost entirely black, the trochanters colored as in *Idecthis biconjunctus*, anterior and middle femora yellowish ferruginous, on the anterior legs, the tarsi are brownish testaceous, the claws brown on the middle legs, the tibiæ are largely yellow above, beneath and on the apical third above yellowish ferruginous, tarsi with the first three joints whitish, tipped with brown, beyond the joints are brown, as are the claws, posterior femora ferruginous, tipped with dark brown, posterior tibiæ pale yellowish, with a ferruginous stripe beneath, apical third black nearly all the way around the apical half of the basal third, with a black band nearly all the way round, posterior tarsi with nearly all of the basal half of the first joint and the basal third of the second and third joints cream color, tinted with testaceous, otherwise the joints are dark brown, like the remaining joints and claws.

Abdomen.—Black, the basal half of the venter partly yellow; the ovipositor brown, attaining the tip of the black sheath, the ovipositor about two-thirds the length of the abdomen.

Type.—University of Kansas.

Type locality.—Douglas Co., Kansas, 900 ft.

One specimen taken in August, by E. S. Tucker.

Angitia autumnalis n. sp.

Appears to be like *Limnerium lophyri* Riley, which is too briefly described to make the relation certain.

♀.—9 mm.—*Head*.—Face dull, rather coarsely granular almost as if covered with adjoining punctures; pubescence white, nowhere hiding the tegument; cheeks distinctly narrower than the eye; the eyes distinctly emarginate just above the middle of the inner margin, cheeks shining minutely roughened and tessellate; antennæ thirty-four jointed, the first joint of the flagellum as long or almost as long as the scape and pedicellum together; head and antennæ black, except the scape, which is yellow beneath, palpi yellow, mandibles yellow, except at apex, where they are brown.

Thorax.—Dorsum about as coarsely sculptured as the face but more granular and punctate than rugulose; pleura less granular than the dorsum, shining; metanotum dull rugulose, devoid of carinæ, excepting the bounding pleural carina, with a shallow median longitudinal furrow that has some inconspicuous transverse ridges, metapleura sculptured somewhat like the dorsulum, but more shining; the thorax like the head has white pubescence that is very short on the dorsulum, much longer on the pleura and metathorax; the thorax is black, excepting the tegulæ and bases of the wings, which are yellow, nervures and stigma very dark brown, areolet a trapezium, petiolate, the petioles long or a little

shorter than the shortest side of the trapezium; coxæ black, the anterior ones partly yellow around the apex, the middle pair with a little yellow at apex, trochanters nearly almost all yellow, only the posterior proximal pair partly brown, anterior femora, anterior and middle tibiæ yellow, partly stained with a kind of brownish testaceous, especially beneath, the tarsi of anterior and middle legs yellow, with two or three apical joints strongly brown, claws brown, middle and posterior femora ferruginous, the middle pair tipped with yellow, posterior tibiæ and tarsi brown, the tibiæ yellow at extreme base and ferruginous beneath, tibial spurs testaceous, with more or less brownish.

Abdomen.—Chiefly ferruginous, only the first three segments with black, petiole black, except the apical nodular third, which is ferruginous, the second segment black, except a narrow subapical band fused with lateral triangular marks, all of which are ferruginous, third segment with a little more than the middle third of the basal two-thirds black, ovipositor brown, nearly as long as the second abdominal segment, the sheaths black.

Type.—University of Kansas.

Type locality.—Douglas Co., Kansas, 900 ft.

One specimen taken in September, by E. S. Tucker.

Campoplex villosus Nort.

One ♀, Douglas Co., 900 ft., taken by E. S. Tucker.

Ophion idoneum Vier.

♂ taken at Lawrence, 900 ft. in April, by E. S. Tucker.

Pimpla annulipes Brulle.

Two ♂ from Douglas Co., 900 ft., taken in October, by E. S. Tucker, and in July (U. of K. coll.), lot 61; sub.

Pimpla parvialba n. sp.

Readily distinguished by the black posterior tibiæ with only the basal fourth white.

♂.—6 mm.—*Head*.—Face dull granular, with separated shallow punctures; clypeus shining, more sparsely punctured; cheeks shining and punctured; malar space about as high as the pedicellum is long, antennæ twenty-three jointed, the scape and pedicellum together about as long as the second joint of the flagellum; head black, excepting the flagellum, which is dark brown, clypeus brown, with the anterior margin blackish, mandibles yellow, dark brown at apex, palpi testaceous.

Thorax.—Shining, closely punctured, upper half black, the tegulæ a line beneath posterior wings and a mark on each side of dorsulum cream color or whitish, lower half of thorax chiefly ferruginous; metathorax entirely black, with an even surface and no carinæ; scutellum with two shades of brown and with a whitish margin posteriorly; wings hyaline, with the nervures colorless at base, otherwise dark brown, stigma dark brown, with the basal and apical corners whitish, discocubital nervure almost forming a right angle, areolet oval, almost

like a metathoracic spiracle in *Campoplex*, the lumen almost obliterated, the exterior nervure colorless, the petiole nearly as long as the longest side of the areolet; testaceous or ferruginous, the proximal trochanters chiefly concolorous with the coxæ, distal trochanters largely whitish, femora ferruginous, the anterior and middle pairs tipped with whitish, the posterior pair with blackish at tip, anterior and middle tibiae with from testaceous to ferruginous, with whitish at base and apex, tarsi of anterior and middle legs testaceous, but the apical joint and the claws dark brown, posterior tarsi black, anterior and middle legs with testaceous spurs, the spurs of the posterior legs black or blackish.

Abdomen.—Black, shining and partly closely punctured, first segment punctured throughout, with no sharply defined anterior truncation and with almost parallel longitudinal carinae extending from the anterior to near the posterior margin, the second segment longitudinally wrinkled and with a very slight transverse furrow, the succeeding segments with no transverse furrow, the third segment closely punctured, with the apical margin smooth, fourth and succeeding segments impunctate.

Type.—University of Kansas.

Type locality.—Lawrence, Kansas.

One ♂ taken at twilight in June, by E. S. Tucker.

Harrimaniella pæneimitatrix Vier.

One ♀ from the type locality taken in October, by E. S. Tucker.

Sychnoportus tuckeri Vier.

One ♀ taken at night in May, at Lawrence, by E. S. Tucker. This specimen differs from the type as follows: scape brown, flagellum with the basal half largely pale brown, the apical half dark brown; third abscissa of the cubitus parallel with the radius.

Cryptus albitarsis Cress.

♂ var. taken at night in May, at Lawrence, by E. S. Tucker. This specimen differs from the type in having the scutellum immaculate.

Phæogenes fungor Nort.

Ichneumon (craticlneumon) extrematatis Cress.

One ♀ taken in Douglas Co., 900 ft., in October, by E. S. Tucker.

CHALCIDOIDEA.

Metapon rufipes Ashm.

One ♀ taken in Morton Co., 3200 ft.

Eutrichosoma mirabile Ashm.

One specimen, Hamilton Co., 3350 ft.

Perilampus platygaster Say.

Two specimens, Wichita, September (U. of K., lot 663). One specimen, Sedwick Co., 1300 ft., Sept. (E. S. Tucker, U. of K.).

Perilampus hyalinus Say.

One specimen, Douglas Co., 900 ft.

Spilochalcis mariae Cress.

One specimen, Douglas County, May (S. J. Hunter); (U. of K., lot 727).

Spilochalcis torvina Cress.

One specimen, Douglas Co., 900 ft., Oct. (E. S. Tucker).

Spilochalcis delumbis Cress.

One specimen, Douglas Co., 900 ft.

Spilochalcis bioculata Cress.

One specimen, Clark Co., 1962 ft., June, 1902.

Chalcis ovata Say.

Two specimens, Douglas Co., 900 ft.; two specimens, Morton Co., 3200 ft.

CYNIPOIDEA.

Aspicera albihirta Ashm.

One specimen, Morton Co., 3200 ft.; two specimens, Lawrence, at night and at twilight, June (E. S. Tucker).

Figites coloradensis Ashm.

One specimen, Morton Co., 3200 ft.; Hamilton Co., 3350 ft.

PROCTOTRYPOIDEA.

Scelio monticola Brues, sp. n.—“*Female*.—Length 4.25 mm.—Black, with the legs, except coxæ, and the first two joints of antennæ reddish yellow. Head about twice as wide as thick antero-posteriorly; face slightly but distinctly produced medially above and between the antennæ. Front and vertex rugoso-punctate, the face with strong transverse striations, which curve down a little laterally. Antennal scape thick, pedicel a little longer than the first flagellar joint, the remaining joints strongly transverse, three times as wide as long, except the last two. Mandibles piceous, palpi short. Pronotum finely rugulose; mesonotum shining, with distinct furrows, striate along the median line, laterally but within the furrows reticulated and outside the furrows also smooth with a few punctures. Scutellum shining, faintly punctate or striate. Metanotum longitudinally rugose, its lateral angles rather prominent and slightly produced. First and second segments of abdomen each twice as wide as long, third and

fourth longest, subequal, all longitudinally aciculated especially the petiole. Legs reddish yellow, the coxæ black. Wings slightly infuscated, stigma distinct but without any trace of a stigmal vein."

"Two specimens, both females, Hamilton Co., Kansas (3350 ft.), and Morton Co., Kansas (3200 ft.), both collected by Prof. F. H. Snow."

"The present species falls in the group with *ædipodæ* Ashm. and *striaticollis* sp. nov., from both of which it differs in sculpture, form of metathoracic angles and structure of the head."

VESPOIDEA.

Mutilla (Timulla) vesta Cress.

Wallace Co., 3000 ft. This is a variety with an inverted Λ -shaped area of dark hairs from the apex of the second to the fourth abdominal segment isolating a central cone-shaped area of silver hairs.

Mutilla marpesia Blake.

Morton Co., 3200 ft., June. With the anterior angled, the thorax somewhat spined.

Mutilla (Timulla) montivagoides n. sp.

Related to *montivaga*, from which it is distinguished by the black hairs of the venter of abdomen.

♀.—10 mm.—*Head*.—Rather quadrate, not wider than the thorax, somewhat narrower, coarsely punctured, the punctures mostly adjoining some confluent, no buccal carina, malar space as long or nearly as long as one and a half times the greatest diameter of the eye, pedicellum and first joint of flagellum together a little longer than joints 2 and 3 of the flagellum, joint 1 of the flagellum a little shorter than joints 2 and 3 combined.

Thorax.—Subquadrate, the greatest length thereof about equal to the greatest width of the thorax, dorsum punctured much like the head, the junction of the dorsum with the pleura not carinate rather crenulate, the pleura with rather well-separated deep punctures of a size greater than the interstices.

Abdomen.—First dorsal segment slightly convex, appearing fused with the second segment rather sparsely punctured, some of the interstices being several times the width of the punctures, sculpture of the second dorsal segment apparently closely punctured, the punctuation hidden by the pubescence, succeeding dorsal segments, apparently more finely sparsely punctured than the second dorsal segment, especially is this true of the fourth dorsal segment, the disc of which is visible in the type, first ventral segment with a rather undulate longitudinal carina, the second ventral segment with well-separated punctures of rather large size, the interstices usually a little wider than the punctures, the

succeeding ventral segments with adjoining or nearly adjoining punctures. Pygidium with fine apparently concentric wrinkles.

Color.—Ferruginous, scape and pedicellum, mandibles at base and apex very dark brown, appearing rather black, flagellum brown, dorsum of head, thorax and second abdominal segment covered, almost to the extent of hiding the sculpture, with appressed golden hairs, interspersed rather sparsely with rather erect black hairs; legs, suture between first and second dorsal abdominal segments, apices of abdominal segments, practically all of the exposed portion of the dorsal segments beyond the second and all of the ventral segments beyond the third, black; sides of head and thorax, dorsum of first abdominal segment and venter of abdomen clothed with rather erect and sparse black hairs.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas (F. H. Snow).

Mutilla prognoides n. sp.

Related to *orcus* and *leda* with the color pattern of *magna*. Superficially like *progne*.

♀.—16 mm.—*Head*.—Quadrate, as wide as the thorax, excluding the temples, and space adjoining eye closely rather rugosely punctured, no carinæ, the malar space a little longer than the greatest diameter of the eye, pedicellum a little shorter than the second joint of the flagellum, the first joint of the flagellum a little longer than the two succeeding joints together.

Thorax.—From above rather ovoid, the greatest length of the same distinctly greater than the greatest width of the thorax, dorsum with large shallow almost adjoining punctures, prothorax with a longitudinal rather undulate carina on the pleura anteriorly, the junction of the dorsum with the pleura not carinate, rather crenulate, pro- and mesopleura practically rugoso-punctate, the impressed space between pro- and mesopleura tessellately punctured, metapleura shining, largely impunctate, posterior face of metathorax dull, rather reticulate.

Abdomen.—First dorsal segment dull, reticulate, second dorsal segment shining, with shallow, almost confluent punctures, the succeeding dorsal segments, except the ultimate, have their sculpture hidden by pubescence more than the second segment, pygidium finely longitudinally striate, the striæ almost straight; first ventral segment carinate, the carina produced into triangular projections or teeth that about divide the carina into thirds, the anterior tooth longer than the posterior one, the second ventral segment punctured and shining, much like the corresponding dorsal segment, the succeeding ventral segments very closely punctured and dullish.

Color.—Black, dorsum of head, thorax and abdomen, the latter inclusive of the first segment, covered with a rather dense ochreous appressed pubescence that almost or actually obscures the sculpture, in addition the dorsum of the head has sparse erect black hairs and abundant erect ochreous hairs, dorsum of thorax and abdomen, the latter, excepting first segment, with abundant erect ochreous hairs; greater part of head and thorax sparsely covered with black hairs as are the first dorsal, basal fifth of second dorsal and the second ventral segments, beyond the second segment the ventral segments are rather densely clothed with black pubescence.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas (F. H. Snow).

A series of six paratypes with these data, type locality June, 1902 (F. H. Snow); Wallace Co., Kansas (F. H. Snow), show variation from the type in color and size, the color from pale ochreous to fulvous, the size from 11 mm.—13 mm.

Mutilla (Timulla) nigricauda n. sp.

Related to *montivaga*, from which it differs in having all the abdomen, except the second segment, black.

♀.—10 mm.—Differs from *M. montivagoides* as follows: crest black, hairs on head rather sparser, dorsulum with erect black hairs confined to the anterior and lateral margin, the same holds true for the second dorsal abdominal segment as for the dorsulum; pygidium roughened but not distinctly wrinkled. Greater part of head, thorax and second dorsal abdominal segment ferruginous, head, thorax and second dorsal abdominal segment with the dorsal aspect covered with golden pubescence.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas.

Collected in May (F. H. Snow).

Mutilla (Photomorphus) quintilis n. sp.

Easily distinguished by the entirely black color.

♂.—9 mm.—*Head*.—Typical, covered with loose silvery pubescence

Thorax.—The anterior lateral margin of prothorax rounded, not distinctly ridged, mesosternum on each side of the median furrow produced into a short, rather truncate, edentate process. Metanotum with no distinct shining bisected area, rather imperfectly reticulate and roughened. Pubescence of the dorsum of thorax apparently more yellowish than on the dorsum of the head. Cubitus of the anterior wings distinctly angled at the insertion of the first transverse cubitus; second transverse cubitus received by the radius just before its middle.

Abdomen.—Felt line on dorsum of second segment extending within but a very short distance of the anterior and posterior margins of this surface; the felt line on the venter of second segment about half as long as that on the dorsum. No tubercle between fifth and sixth ventral segments, the apical ventral segment smooth and shining, sparsely punctured in the middle, rather closely so on the lateral margins and the posterior margin.

Color.—Black, with the mandibles, antennæ, legs, margins of abdominal segments and apical spines more or less brown.

Remarks.—In describing this species it was compared with the type of the subgenus, therefore characters common to the type and it were not redescribed. The pubescence in this species is almost uniformly whitish or rather silvery, the only departure being a slight yellowish tinge on the dorsum.

Type.—University of Kansas.

Type locality.—Douglas Co., Kansas, 900 ft.

One ♂, collected in July (U. of K., lot 61).

Mutilla (Photomorphus ?) crepuscula n. sp.

Intermediate between *Photomorphus* and *Odontophotopsis*. The anterior ocellus being distinctly larger than a posterior ocellus.

♂.—5 mm.—*Head*.—Typical.

Thorax.—The anterior lateral margin of the prothorax bounded by a faint ridge; punctures of pronotum shallow, distinct and rather sparse, the punctures 1-3 or more puncture widths apart; propleura with a few shallow rather indistinct punctures; mesonotum about as sparsely punctured as the pronotum, but the punctures somewhat larger and more distinct, parapsidal grooves absent; scutellum and postscutellum rather rugose but shining; mesosternum anteriorly on each side of the median furrow developed into a transverse crenulate ridge, which, at the furrow, is rather acute angled and directed downwards and backwards; metathorax, excepting metanotum and pleura, distinctly reticulated, the space about as large as a lateral ocellus; metanotum with a longitudinal smooth space about twice as long as broad at the base and one and a half times as broad at apex as at base and divided into two equal parts by a longitudinal distinct raised line or septum; metapleura smooth and shining; first submarginal cell about as large in area as the second submarginal cell, but somewhat longer than the latter cell, cubitus forming an obtuse angle at the insertion of the first transverse cubitus and forming a more obtuse angle at the junction of the recurrent nervure with it, first transverse cubitus forming an acute angle with the radius to which it joins, so that the first abscissa of the radius is only about as long as the third antennal joint, the second abscissa of the cubitus about twice as long as the first abscissa.

Abdomen.—Petiole typical, with sparse shallow punctures from six to eight, and in some places more puncture widths separating the punctures, second segment polished and punctured, the punctures separated as on the petiole, the felt line or impression running nearly parallel with and just within the lateral margin of the second dorsal segment extending nearly all the way from the anterior to the posterior margin of this surface, the corresponding line on the second ventral segment about one-third the length of this latter segment; the segments beyond the second practically impunctate on the dorsum, rather indistinctly punctate on the venter, sixth ventral segment rather flat, smooth and distinctly punctured, the punctures in the centre about as sparse as on the dorsum of the second abdominal segment, adjoining near and above the posterior margin.

Pubescence almost in to fine and silvery, that of the dorsum about as long as the eye and about as sparse as the punctures, sides of the body with shorter concolorous pubescence on the venter, and to a great extent on the legs it is nearly as long as on the dorsum.

Color.—Sort of a dark testaceo-ferruginous, excepting the abdomen beyond the petiole, part of the petiole, a spot within the ocelli, a spot on each side of the prothorax, femora, tibiae, middle and posterior metatarsi, all of which are more or less dark brown, ocelli yellowish, eyes black, antennae, coxae, trochanters and tarsi more or less brownish testaceous, mandibles brownish testaceous, brown at tip.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas.

One male specimen collected by F. H. Snow.

Mutilla haleyo Fox.

One ♀ taken in Hamilton Co., at an elevation of 3350 ft. This specimen is not typical, but seems to differ from the type only in the hairs on the second abdominal segment being sparser and in the distinctly visible punctures of the same segment.

Mutilla (Photopsis) imperialiformis n. sp.

Readily distinguished from its ally *imperialis* by the entirely black head and thorax, sculpture, etc.

♂.—7 mm.—*Head*.—Thorax and abdomen typical of the group to which it belongs; parapsidal grooves distinct nearly all the way from the anterior to the posterior margin of the dorsulum; metanotum with an almost quadrate shining space which is, as the area in this region usually is, bisected by a longitudinal raised line almost forming a ridge; wings uniformly fuscous, the only departure from this being a hyaline streak from the base of the stigma across the first submarginal cell to the junction of the first transverse cubitus with the cubitus, from this latter point obscurely across the second submarginal cell to the junction of the second transverse cubitus with the cubitus and merging into a hyaline spot adjoining the second submarginal cell; felt line of the second dorsal abdominal segment extending from near the anterior margin of the segment to a point near the posterior margin, each extremity being removed from a margin for a distance about as long as the terminal tarsal joint on the posterior legs; the felt line on the second ventral abdominal segment rather indistinct and only about as long as the terminal tarsal joint of the posterior legs; the terminal ventral abdominal segment nearly flat, with a shallow median longitudinal concavity, from very sparsely punctured along the middle to closely punctured along the lateral and posterior edges.

Antennæ and mandibles very dark brown, the latter tipped with black, second and third abdominal segments with an apical margin of golden brown, the succeeding segments entirely golden brown, otherwise the abdomen is black, excepting the tarsi, which are dark brown.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One ♂ taken in June, 1902, by F. H. Snow, another ♂ (paratype) from Nogales, Arizona, July 7, 1903 (Osler), is in the collection of Cornell University.

Chyphotus (Milluta ?) peculiaris Cress.

One ♀ specimen from Clark Co., 1962 ft. This specimen is not typical, and may prove to be a variety or race of the typical form.

Brachycystis stictinotus n. sp.

The distinctly punctured thorax and ridged metathorax serve to distinguish this species from *indiscretus*, to which it is related.

♂.—8 mm.—*Head*.—Smooth and shining, almost polished with a few punctures; scape a little shorter than the first joint of the flagellum, the pedicellum about one-fourth the length of the first joint of the flagellum; in other respects practically as in *indiscretus*.

Thorax.—Dorsulum distinctly but very sparsely punctured; metathorax almost entirely smooth, impunctate and shining, the metanotum slightly elevated, longitudinally along the middle, the elevation practically forming segment of a cylinder; wings almost as in *indiscretus*, but the second submarginal cell is just sessile, and the third submarginal cell is apparently longer than high.

Abdomen.—Almost exactly as in *indiscretus*.

Brown, pleura, coxæ, femora and first abdominal segment darker by far than the other brown portions, palpi somewhat whitish testaceous, mandibles testaceous, tipped with brown, antennæ dull testaceous, tinted with brown, anterior legs testaceous, all tarsi concolorous with the anterior legs, middle and posterior tibiæ testaceous, in part partly brown, head black, abdomen, excepting the first segment, very dark brown, almost black in appearance.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One ♂ specimen taken in June.

Elis (Trielis) pollenifera n. sp.

♀.—22 mm.—*Head*.—The sculpture of the posterior aspect of the head hidden by pubescence, cheeks, temples and vertex polished and impunctate, excepting for a few scattered punctures near the posterior and lateral boundaries of the vertex, front somewhat protuberant from the emargination of the eyes to the vertex and between the insertion of the antennæ and the ocelli, most of the front with almost adjoining punctures all of which are deep and well developed, in some portions of the front, especially near the ocelli and near the eyes, the punctures are as much as five puncture widths apart, a short, deep, rather broad longitudinal sulcus traverses the front from a point as far from the anterior ocellus as the latter is wide to a point as from an imaginary line drawn through the posterior margin of the antennal foramina as the anterior ocellus is wide; clypeus rather convex and coarsely punctured, the punctures adjoining along the margins in the middle as much as three and four puncture widths apart and on rather nodose elevations of the tegument, the anterior margin slightly reflexed, somewhat membranous, with the anterior and lateral edges forming an undulating line; scape shining, sparsely punctured, as long as the four succeeding antennal joints combined, pedicellum about as long as the fourth antennal joint, third antennal joint a little shorter than the fourth.

Thorax.—Lateral aspects of the pronotum with strong, deep, almost adjoining punctures, the anterior aspect thereof smooth, polished and impunctate; dorsulum shining, with a large central area impunctate, adjoining this area and to the margin the surface is punctured in much the same way as the lateral aspects of the pronotum, excepting for the limited space traversed by the rather deeply im-

pressed parapsidal grooves, which attain the posterior margin of the segment, but fall short of the anterior margin by about one-third the length of the segment; scutellum shining, almost impunctate, bisected by a longitudinal furrow, the few punctures on its surface being along the margins and the longitudinal furrow; postscutellum with the same sculpture scheme as the scutellum; superior and posterior aspects of the metathorax smooth, shining and with deep almost adjoining punctures; wings fuscous, with a violaceous reflection, the apical acute angled portion of the median cell, the first submarginal and the basal acute angled portion of the marginal cell yellow, the nervure adjoining this yellow area light brown, the other nervures and portions of nervures dark brown.

Abdomen.—The segments with much the same scheme of punctuation as the dorsulum, the pygidium, however, very closely apparently striate punctate.

Pubescence reddish, inconspicuous or absent, excepting for a fringe around the insertion of the antennæ, the posterior aspect of the head, the lateral aspects of the pronotum, pro- and mesopleura, coxæ, trochanters, femora, tibiæ and metatarsi, abdominal segments at base, apex and laterally, pygidium covered with short appressed golden bristles.

Black; legs, excepting coxæ and trochanters, which are black or blackish, more or less dark brown, spurs testaceous or brownish testaceous, second dorsal segment with each lateral third, almost completely occupied by an almost circular yellow mark, a more oval yellow mark on each side of the third dorsal segment occupying all but about the middle fifth of the segment, on the fourth dorsal segment the oval yellow marks occupy nearly all of the segment, being separated only by a T-shaped brown area, the fifth dorsal segment brown, the ventral segments black and brown.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas.

One ♀, the type collected by S. J. Hunter, another ♀ (paratype), from the collection of Wm. J. Fox, collected in Wallace County, Kansas, 3000 ft., by F. H. Snow.

The paratype differs from the type in having the frontal sulcus reduced to a pit, with a shallow groove extending laterally therefrom almost at right angles, in having a slight median longitudinal impression on the vertex and dorsulum and a less pronounced longitudinal groove on the scutellum, the pygidium, which has the hair rubbed off, is dull and rather shallowly, closely punctate, median, submedian and part of second discoidal cell yellow.

Variety a.—♀.—Structurally different from the type in being almost exactly like the paratype and differing from both in having the pubescence golden instead of reddish.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas.

One ♀ taken in July, by S. J. Hunter.

Variety a.—♂.—*Head*.—With a transverse smooth almost impunctate space behind the posterior ocelli, a smooth impressed transverse band anterior to the anterior ocellus divided longitudinally by a raised line, otherwise the tegument is more or less closely punctured; clypeus convex, with almost adjoining punctures and a smooth depressed anterior margin.

Thorax.—Dorsulum punctured all over, the anterior half dull, and with adjoining punctures, the posterior half shining and with many of the punctures three and five puncture widths apart; scutellum and postscutellum with adjoining or nearly adjoining punctures and longitudinally impressed in the middle.

Abdomen.—Dorsal abdominal segments more closely and finely punctured than the posterior half of the dorsulum.

Pubescence and color much the same as in the ♀, differing chiefly as follows: Clypeus with a yellow spot each side of the middle, lateral portions of the pronotum with a yellow mark parallel with and near the superior margin, tegulæ with a yellow spot, scutellum with a triangular yellow mark, postscutellum yellow, a median longitudinal yellow line on the metathorax, third and fourth ventral abdominal segments with a yellow spot on either side, yellow spots on the third dorsal segment almost touching, fourth and fifth dorsal segments with yellow bands anteriorly incised, sixth dorsal with an indistinct band-like yellow mark.

Notozus connexus n. sp.

In structure very like *marginatus*, in color and size like *viridicyaneus*.

6 mm.—*Head*.—Punctured almost exactly as in *marginatus*, the frontal excavation smooth and to a great extent impunctate, vertex with some of the punctures distinctly separated from each other by polished impunctate spaces.

Thorax.—Pronotum with part of the anterior half with such small shallow close punctures as to appear rugulose, the greater portion, however, with somewhat larger punctures than the vertex, the punctures being adjoining or one to two puncture widths apart, mesonotum almost entirely punctured like the coarsely punctured portion of the pronotum; scutellum reticulated, the meshes deeper than the punctures on the mesonotum and about three times as large; postscutellum somewhat more coarsely tessellate than the scutellum, the meshes deeper, the processes viewed from the side forming a right angle with the posterior aspect of metanotum, rounded at apex and like a finger in outline; metathorax rather reticulate like the postscutellum.

Abdomen.—Punctures of the first dorsal segment a little smaller than the punctures on the vertex and separated from each other by one to two puncture widths of shining space; the second dorsal segment punctured much the same as the first; apical dorsal segment with adjoining punctures about as large, but not so distinct as the punctures on the second dorsal segment; the truncature of the apical abdominal segment reniform bounded by a raised line and about twice as wide as long antero-posteriorly.

Type.—University of Kansas.

Type locality.—Clark Co., 1962 ft., Kansas.

One specimen taken by F. H. Snow.

Chrysis (Gonochrysis) kansensis n. sp.

Related to *perpulchra*. Foveæ of metanotum smooth, parts at apex of abdomen not distinctly impressed.

7 mm.—*Head*.—With adjoining punctures that average a little less than one-fourth the size of the anterior ocellus, frontal excavation transversely striate, with a round depression or elevation about the size of the anterior ocellus near the short ridge that bounds the excavation superiorly, a small shining impunctate space adjoining the lateral ocelli along the portion nearest the posterior and lateral aspect of the head.

Thorax.—Pronotum punctured very like the front; the mesonotum not quite so closely and a little more coarsely punctured than the pronotum; scutellum and postscutellum not shining like the other segments of the thorax, rather dullish, the punctures adjoining and about as large as those on the mesonotum, postscutellum slightly arched.

Abdomen.—First dorsal segment punctured nearly like the mesonotum, the punctures a little more distinct and slightly separated, the second and terminal dorsal segments punctured more like the front, apical margin of the dorsum of the abdomen slightly undulate, interrupted in the middle by an emargination that is about twice as wide as deep, the subapical dorsal impressions represented by about fifteen rather deep, equally separated punctures.

Pubescence as usual.

Green, with bluish reflections, especially on the sutures and the abdomen above.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One specimen taken by F. H. Snow.

Chrysus (Tetrachrysis) equidens n. sp.

Related to *dorsalis*. The teeth at apex of abdomen of equal length.

6 mm.—*Head*.—With adjoining shallow punctures, simulating meshes of a reticulation, the puncture a little less than one-third the size of the anterior ocellus, frontal depression smooth, its lateral margins bearing a few punctures smaller than on the vertex but apparently deeper.

Thorax.—Pronotum punctured much like the vertex, the remaining portion of the dorsum with more distinct though equal sized punctures, that above narrow spaces between them.

Abdomen.—Dorsum shining and with punctures after the fashion of those on the mesonotum; subapical depressions on the apical dorsal segment rather irregular, somewhat confluent, the individual pits separated from each other by slight elevations of the tegument, apical teeth about half as long as the distance between the latero-median teeth, distance between a latero-median tooth and a lateral tooth a little greater than the distance between the latero-median teeth, the tips of the latero-median teeth nearly as far removed from the tip of the lateral teeth as the latero-median teeth are from each other, lateral margin of the apical dorsal abdominal segment with distinct outward curve, then an inward curve, then an outward rounded angle, then an inward curve.

Pubescence as usual.

Color green, with bluish reflections.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One specimen, collected by F. H. Snow; another taken in Kansas by the same collector has the blue predominating.

Chrysis (Tetrachrysis) kahli n. sp.

Related to *frey gessneri*.

6 mm.—*Head*.—As in *frey gessneri*. Thorax in general punctured like the head. Lateral teeth of metathorax very prominent, acute and practically at right angles to the same. Dorsal aspect of metathorax in the lower half rather coarsely, irregularly grooved or scooped out. First abdominal segment about as long as the terminal or third abdominal segment, with a shallow channel in the middle of the dorsum. This channel not extending much more than half way toward the apex. On either side of this channel, and in the channel itself, the punctures are distinctly separated from each other. The spaces between are one puncture or less in width. Laterally, the punctures become adjoining and give the segment a regular appearance. The second dorsal segment is as long as the combined length of the first and third dorsal segments, punctured throughout, nearly as the first segment near the lateral margin. The lateral margin of this second segment is punctured like the lateral margin of the first segment. Thus the entire second segment has a rugulose appearance, which is, however, not so marked along the middle of the segment as along the lateral margin.

The third dorsal segment punctured like the second dorsal segment, with a series of eleven very distinct, almost circular, deep, separated punctures or pits. These punctures are from less than one of these puncture widths to two of these puncture widths apart. The lateral margin is sinuate, with two troughs and two crests. The first trough one-quarter the distance from the base (one-quarter the length of the lateral margin from the base). The second three-quarters the length of the lateral margin from the base.

The undulations are very gentle and not deviating far from the straight line. Apex nearly as in *frey gessneri*. The external teeth are directed toward the middle line, and distinctly shorter than the middle teeth, which are directed straight back. The emarginations forming these teeth subequal in width. The lateral emarginations forming a segment a little more than a semi-circle. The median emarginations practically forming two sides of an equilateral triangle.

Type.—University of Kansas.

Type locality.—Kansas.

One specimen, collected by F. H. Snow.

Chrysis (Tetrachrysis) pattonella n. sp.

Related to *pattoni*. Median teeth at apex of abdomen as far from each other, or nearly, as from the lateral teeth.

6 mm.—Basin of face punctured, excepting for a very short distance on either side of the median ridge, which occurs for a short distance along the middle of

the face half-way between the insertion of the antennæ and the anterior ocellus. This is a rather slight longitudinal ridge. Half way between the upper edge of this ridge and the anterior ocellus there is a transverse arch extending nearly from eye to eye and forming practically three sides of an octagon. Above this ridge the tegument is practically reticulated as far as the vertex, temples and cheeks. The distance between the posterior ocelli is about one and one-half times as great as the distance between the posterior ocelli and the anterior ocellus. This latter distance being practically equal to the distance between the posterior ocelli and the nearest eye margin.

The dorsum of the thorax reticulated in much the same way as the dorsum of the head. The reticulations on the dorsulum, scutellum and metanotum somewhat coarser than on the pronotum. The lateral angles of the metathorax are acute, slightly curved and directed backward, downward and outward.

The first abdominal segment with a very shallow median impression extending nearly to the posterior margin along the middle of the first dorsal segment, the punctures are separated in much the same way as in the preceding species. The basal half of the second dorsal abdominal segment is of a rather rugulose character, the punctures adjoining each other. On the posterior half the punctures are separated. The spaces between them, however, are not more than a puncture's width apart. The apical dorsal abdominal segment is punctured in much the same way as the preceding segment. Laterally the abdominal segments are rather reticulated like the dorsum of the head and thorax. The sulcus of the apical dorsal segment has a series of pits irregularly separated (when separated), mostly confluent. The lateral margin and the posterior margin with much the same pattern as in *kahli*.

Color.—Green.

Legs and venter of abdomen with bluish reflections.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas, 3350 ft.

One specimen, collected by F. H. Snow.

Chrysis (Tetrachrysis) snowi n. sp.

Related to *cærulans*. Readily distinguished by the white pubescence in the basin of the face.

11 mm.—*Head*.—Scarcely as in its ally; frontal excavation distinctly margined above, covered with adjoining shallow punctures or rather somewhat rounded indentations, these are so small that it would take about six to ten of them in a line to span transversely the first joint of the flagellum, a triangular area with its base at the superior boundary of the frontal excavation, and its apex on the median line about half way between the anterior ocellus and the interspace between the insertion of the antennæ has larger nearly circular depressions, the frontal depression has the sculpture of the lower two-thirds obscured in certain lights; vertex and occiput about twice as coarsely punctured as the triangular area of the frontal depression.

Thorax.—Somewhat more coarsely punctured than the vertex.

Abdomen.—More distinctly punctured than the dorsulum, but its punctures not larger, nor as close together; pits of the apical dorsal segment confluent, forming

two grooves, one on either side of a median portion as high as and continuous with the elevated portion of the segment, the grooves indistinctly, equally parted by low raised lines across the shortest diameter, teeth sharp, nearly as long as the distance between the latero-median and lateral teeth, the latero-median teeth about one and a half times as far apart as the latero-median and lateral teeth.

Almost uniformly metallic green and covered with conspicuous white pubescence, the hairs of which are about as long as the penultimate joint of the flagellum, and while abundant, not sufficiently close together to at all obscure the tegument.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One specimen, taken in May by F. H. Snow.

Odynerus (Ancistrocerus) bustamenti Sauss., ♀.

Hamilton Co., 3350 ft. (F. H. Snow).

One specimen, with only a slight indication of yellow on the postscutellum.

Odynerus delodontus s. sp.

Related to *blandus*. Superficially like *toas*. Has no tooth back of the postscutellum.

♀.—11 mm.—*Head*.—Clypeus convex, with elongate almost adjoining punctures, truncate at tip, the truncation rather rounded out and bounded on each side by a short tooth, the remainder of the head with practically adjoining punctures, which are smaller than those on the clypeus and not elongate as there.

Thorax.—Punctured almost exactly like the head exclusive of the clypeus; postscutellum and metathorax almost as in *blandus*, the metathorax, however, has no crest or any elevation whatever where it comes in proximity with the postscutellum, and the excavation is not strigose but covered with rather indistinct shallow adjoining punctures.

Abdomen.—As in *blondus*, but the dorsum is convex, not depressed and with the punctures not so scarce and close as those on the thorax; the punctures of the second dorsal segment smaller and closer than those on the first dorsal segment, the posterior margin of the second dorsal segment very slightly reflexed.

Color.—Differs from *blandus* as follows: clypeus with a line on the posterior margin, no line between the eyes, line of yellow between the superior and posterior aspects of the metathorax and the lateral aspect of the metathorax; first, third, fourth and fifth ventral and fourth and fifth dorsal abdominal segments without yellow, mark on the second dorsal segment present as round spots about half the size of the clypeus and free, the second ventral segment with no yellow excepting the rather narrow apical band.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female specimen, taken by F. H. Snow.

Odynerus egregius n. sp.

Related superficially to *annulatus*. The elevated or convex portion of the second dorsal abdominal segment practically impunctate. The abdomen velutinous.

♂.—11 mm.—*Head*.—Clypeus as broad as long, with its punctures one and two puncture widths apart, punctures of the face larger than on the clypeus, but similarly spaced, the punctures on the vertex and cheeks smaller than on the face and as much as five puncture widths apart; the clypeus truncate anteriorly, with the faintest indication of a tooth on either side.

Thorax.—Punctured much like the face; postscutellum with a slight transverse crest.

Abdomen.—The exposed portion of the third and succeeding dorsal abdominal segments coarsely punctured like the posterior margin of the second dorsal segment which is not at all reflexed.

Color.—Testaceo-ferruginous: space between the eyes above the emargination, a short band extending from the insertion of the antennæ almost to the upper part of the anterior margin of the eye, being separated therefrom by a yellow line, and parallel with the lower margin of the emargination, fifth and succeeding joints of antennæ, posterior aspect of the head, internal margin and tips of the mandibles, anterior fourth of the mesonotum, sutures of the thorax, longitudinal median line on the metathorax confluent, with a transverse oval area of black, and basal portion of abdominal segments black; face, including the clypeus, and excepting the black portion already described, dull yellow, scape anteriorly concolorous, with pale portion of face; narrowed portion of pronotum, spot on anterior and posterior margin of tegulæ, the posterior half of the superior division of the mesopleura, femora at tips, tibiæ anteriorly and the apical margins of the abdominal segments, excepting the terminal segment, yellow, pedicellum and two succeeding joints of the antennæ, brownish, antennal hook dark brown.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One male collected by F. H. Snow.

Odynerus subtoltecus n. sp.

Related to *toltecus*.

♀.—*Head*.—As in *toltecus*

Thorax.—As in *toltecus*, but the postscutellum not at all carinated transversely.

Abdomen.—First segment not quite as wide as the second and with no depression above, the apical margin of the second dorsal segment not so decidedly reflexed as in *toltecus*, but reflexed so as to form an obtuse angle with the segment.

Color.—Black; a spot on each side of the posterior margin of the clypeus, a frontal spot in each sinus of the eyes, a spot back of the eyes, scape in front, a narrowly interrupted fascia on the pronotum, a spot at base of mandibles, posterior half of the superior division of the mesopleura, margin of tegulæ, a spot just behind the tegulæ, a spot near the middle of the posterior border of the dor-

sulum, postscutellum, apical margins on the first, second and fourth dorsal segments of the abdomen, the second ventral segment with a marginal spot on each side of the segment, apical third of anterior femora behind largely, apical third of middle femora in front largely, the tibiæ in front, excepting at apex, yellow, tibiæ at apex brown, the posterior pair black, behind they are all partly brown, mostly black, greater part of tegulæ brown; tarsi brown.

♂.—Very like the female, the vertex ordinary, not tuberculate, the reflection of the margin of the second dorsal abdominal segment forming an acute angle.

Color.—Differs from the female as follows: the yellow spot of the orbital sinus prolonged to the insertion of the antennæ, clypeus all yellow, mandibles yellow, excepting along the margins, middle coxæ and femora anteriorly yellow, tibiæ and metatarsi almost entirely yellow, no yellow spot on dorsulum, fifth and sixth dorsal abdominal segments with an apical band, second ventral segment with an apical yellow band, a lateral marginal spot of yellow on the third dorsal and ventral segments, antennæ brownish beneath.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas, 3250 ft.

One female, collected by F. H. Snow; ♂ type and paratype taken in Colorado by F. H. Snow.

Odynerus leionotus n. sp.

Related to *conformis*.

♀.—11 mm.—*Head*.—As in *conformis*

Thorax.—Likewise as in *conformis*.

Abdomen.—With the second segment reflexed, so as to form a right angle; no transverse rugose edge on the first dorsal segment.

Color.—Nearly as in *vagus*, but the arcuate line at summit of the clypeus is interrupted, all the dorsal abdominal segments, except the apical one, with the apical margin banded with yellow, while only the apical margin of the second ventral segment is margined, in other respects like *vagus*; the femora, however, are largely ferruginous, the anterior and middle pair partly yellow, and all the femora partly black.

Type locality.—Douglas Co., Kansas, 900 ft.

One female, taken in July, by E. S. Tucker.

Odynerus excentralis n. sp.

Differs from *bravo* chiefly in its livery and subgenerically.

♀.—11 mm.—*Head*.—No vertical carina on the clypeus joining it to the head.

Thorax.—Border of the metathorax almost rounded, not trechant.

Abdomen.—No suture on the first dorsal abdominal segment.

Color.—Differs from *bravo* as follows: mandibles largely black, antennæ black, flagellum brownish beneath, scape as in *bravo*, clypeus with a basal arcuate line broken in the middle, a dot on the tegulæ and a dot adjoining the same yellow, legs ferruginous, coxæ and trochanters black, anterior and middle femora tipped with yellow, anterior tibiæ with a yellow streak in front.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One female, collected by F. H. Snow.

Odynerus microstictus n. sp.

Related to *anormis* and *propinquus*. Readily distinguished by the small sparse punctures of the clypeus.

♀.—10 mm.—*Head*.—As in the related species, but the punctures on the clypeus are smaller than those on the front and not so distinct, moreover, they are as much as four and five puncture widths apart.

Thorax.—As in the allied species.

Abdomen.—First abdominal segment narrower than the second, but wider than long; the second dorsal segment slightly depressed before the posterior margin.

Pleura, metathorax and abdomen distinctly sericeous in most lights, having an appearance similar to the bloom on grapes.

Color.—The same as in *anormis*, differing, however, as follows: clypeus with two yellow spots at base, a spot adjoining the emargination of the eyes; ventral segments, excepting the second and third, without an apical yellow margin, apical dorsal segment without yellow, coxæ and trochanters black, otherwise the legs are testaceo-ferruginous, a yellow spot at apex of anterior and middle femora and at base of the corresponding tibiæ, posterior tibiæ with the anterior aspect of the basal half yellow.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female, taken in June, by F. H. Snow.

Odynerus pænevagus n. sp.

Allied to *vagus*, from which it can be distinguished especially by its sculpture and color.

♀.—9 mm.—*Head*.—Nearly as in *vagus*.

Thorax.—Prothorax distinctly angulate, more coarsely punctured than the head, the punctures not more than one puncture width apart; dorsulum with punctures nearly as large as the punctures on the pronotum, with the punctures one to two puncture widths apart; metathorax nearly as in *vagus*, but the margins of the posterior aspect rather angulate.

Abdomen.—First dorsal segment distinctly truncate anteriorly, the punctures on the truncature sparse on the superior aspect adjoining or nearly; second dorsal segment as in *vagus*; on the second ventral segment the punctures are stronger and closer than on the anterior aspect of the first abdominal segment, the third ventral segment dullish, with small closer punctures than the second ventral segments. Apparently bare.

Color.—As in *vagus* to some extent; the departure from that type are as follows: scape behind and pedicellum more or less brown, clypeus yellow, excepting an arcuate brown to black line across the middle, excepting for the basal macula, the mandibles are brown, edges of the metathorax with a median yellow spot; third

dorsal segment without yellow, fourth and fifth dorsal segments likewise, ventral segments, excepting the second, without yellow, the latter having a yellow triangular mark on each side of the posterior margin; legs as in *microstictus*, excepting the yellow line on the posterior tibiæ which is absent; a large reddish spot anterior to the yellow spot on the metathorax; the first abdominal segment excepting the yellow marks testaceo-ferruginous.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female captured in June, by F. H. Snow.

***Odynerus percampanulatus* n. sp.**

Second abdominal segment above almost as in *toltecus*. Postscutellum bituberculate.

♂.—8 mm.—*Head*.—Very as in *toltecus*, vertex and front rather elevated and sparsely punctured, the punctures there of three to four puncture widths apart.

Clypeus.—With shallow, rather elongate punctures, one to two puncture widths apart. Prothorax distinctly margined anteriorly and angulate laterally on the anterior margin. The postscutellum with a salient transverse ridge, which is deeply emarginate in the middle, making the postscutellum bituberculate. Metathorax with the posterior aspect rather deeply concave, the basin so formed not surrounded by a very distinct crest. Very closely, coarsely punctured, with a rather rugose appearance and dullish white. The pleura have most of the punctures separated by a shining tegument. The pronotum and dorsulum with stronger, close punctures than are found on the face. The pleura punctured in much the same way as the dorsulum, with the anterior margin forming quite a salient ridge. The scutellum rather rugulose, with a median longitudinal furrow. The abdomen is much as in *toltecus*, but the first segment is rather compact and not in the form of an elongate bell, and is not quite as wide as the second, nor has it a shallow depression above. The edge of the third segment, while by no means so decidedly reflexed as the edge of the second segment, is, however, slightly reflexed. The punctuation of the first, second and third abdominal segments above is uniformly coarse, and the punctures but slightly separated by shining tegument. On the corresponding ventral segments the punctures are more separated.

The fourth, fifth and sixth dorsal segments are successively less distinctly and closely punctured, and with smaller punctures than the preceding, while the apical or ultimate segment is practically impunctate.

Color.—Ferruginous. Occiput, vertex, dorsulum, lower half of pro- and mesopleura, sutures of metathorax and extreme base of first, and second abdominal segments mostly black. Face yellow, excepting the black which extends from the insertion of the antennæ as a line to the black of the vertex and parallel or practically parallel with the lower margin of the eye emargination. The black of the vertex coming down on the face to an imaginary line drawn from a little above the beginning of the emargination of the eye above straight across to the corresponding point on the other side. Thus the black on the face isolates a central funnel shaped yellow mark, and lateral yellow marks filling the emarginations of the eyes.

Clypeus band at apex of first, second, third and fourth dorsal abdominal segments concolorous or nearly with yellow marks on face. The second ventral abdominal segment has a short yellow line on the apical margin of the segment laterally, and the yellow band on the fourth dorsal abdominal segment occupies only about the middle third.

The front of the scape, a spot on each side of the middle of the pronotum and the lower edge of the tegulæ are yellow, with a brownish cast. The posterior aspect of the scape and the flagellum are chiefly dark brown. The latter, however, is reddish beneath. The sutures of the pleura and sternum are black. The legs more of a testaceous ferruginous. The second dorsal segment with a median longitudinal broad irregular dark brown band traversing the ferruginous portion. Apex of abdomen blackish.

Type.—University of Kansas.

Type locality.—Hamilton Co., 3350 ft., Kansas.

One male collected by F. H. Snow.

***Polistes exclamans* n. sp.**

15 mm.—Related to *crinitus*, but readily distinguished by the maculate pleura, and by the immaculate dorsum and by the brown spot on the clypeus.

Clypeus a little longer than broad, obtusely angulate anteriorly, the angle being somewhat rounded, with distinct scattered punctures on a roughened surface. Ocelli forming an equilateral triangle, the distance between them approximately three-fourths the distance between the lateral ocellus and the nearest eye margin. Anterior margin of the malar space approximately as long as the distance between the lateral ocellus and the eye margin. Prothorax with a distinct margin anteriorly.

Color.—Reddish brown, excepting in the following details: front, from the middle of the emargination of the eyes to the clypeus with a yellow spot extending from either side of the insertion of the antennæ to the eye margin, leaving rather an oblong transverse brown spot between the base of the clypeus and the insertion of the antennæ.

Clypeus yellow, excepting a rather large, median elongate spot which is brown.

The ocellar region is black.

A band from the base of the mandibles around the head.

The mandibles, excepting the margins, which are blackish, the margins of the prothorax, the greater part of the mesopleura, the tegulæ, excepting the margin, which is testaceous, the scutellum anteriorly and the small segment to either side of the scutellum anteriorly, the postscutellum, excepting the margins which are blackish, two parallel lines on the posterior aspect of the metathorax, on either side of the median sulcus extending nearly from the base to the apex, two oblique bands on the metapleura separated by a narrow oblique black band, oblique bands on the posterior aspect of the middle and posterior coxæ, the femora at tip, the tibiæ at base and the tarsi, the lateral and posterior margins of all the abdominal segments, excepting the apical and the dorsal abdominal segment are yellow. Anterior and middle tibiæ on the inner and outer aspects are yellow, on the upper half of the mesopleura, the yellow maculation is in the form of a rhomb and separated from the yellow maculation below. The anterior coxæ

are yellow only in their anterior aspects. The pleura mostly and the metathorax where not maculated, black, as are the base of the second abdominal segment and the inner aspects of anterior middle and posterior coxæ. The yellow maculation on the scutellum forms two spots that leave a rather triangular brown area on the posterior half of this segment.

Wings.—Smoky brown, the infumation slight, excepting in the cells along the anterior margin of the anterior wings.

The apical segments of the abdomen largely brown.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas.

One female collected by S. J. Hunter.

***Cryptocheilus pæneparcus* n. sp.**

In structure almost exactly like *parcus* from Cuba, which, however, has the first 3 abdominal segments entirely red.

♀.—7 mm. long.—*Head*.—Very closely and minutely punctured. Ocelli forming an equilateral triangle. Distance between the posterior ocelli slightly less than between the lateral ocellus and the nearest eye margin. Third joint of the antennæ a little longer than the first and second joints combined, and a little longer than the fourth joint. The fourth and succeeding joints are subequal.

Thorax.—Minutely roughened, apparently impunctate. The dorsum of thorax mostly shining, excepting the metathorax, which is dull throughout. Pleura dull, but not as dull as the metathorax.

The wings are brownish, the brown intensified in the margins and second and third submarginal cells.

The basal nervure angulate, nearly as in the halictine bees. The transverse median nervure inserted into the median as far from the junction of the basal with the median as the transverse median is long.

The third abscissa of the radius a little longer than the first abscissa thereof. The second abscissa as long or nearly as the first and third combined. The subcostal nervure distinctly separated from the costal nervure so that a distinct linear costal cell is visible.

Stigma deep brown, as is the nervure bounding the anterior margin of the wings. The other nervures are more of a brownish testaceous.

Color.—Black.

First and second abdominal segments entirely reddish castaneous. The base of the third abdominal segment concolorous with the preceding.

Type.—University of Kansas.

One specimen, Douglas Co., 900 ft., Kansas

One female collected by F. H. Snow.

***Anoplius (Pompilinus) snowi* n. sp.**

♂.—8 mm.—Black, with a slaty and whitish bloom, sericeous, with whitish appressed pubescence that in certain lights hides the integument which is shining and apparently impunctate.

Ocelli forming a low triangle, distance between the posterior ocelli distinctly

greater than that between the anterior ocellus and the posterior ocelli, but not so much greater as the distance between them and the nearest eye margin.

Third joint of the antennæ is a little shorter, if anything, than the scape, which is approximately as long as the fourth joint. The second joint of the antennæ a little less than one-half the length of the fourth joint. The fifth and succeeding joints of the antennæ subequal.

The antennal joints, except the second, very distinctly demarcated. The anterior of the clypeus entire, as is the posterior margin of the pronotum. In addition to the appressed pubescence, there is a rather loose collection of rather erect and silvery hairs, especially around the head and pronotum.

The maxillary palpi are six jointed, with the second and fifth joints of nearly the same length, that is approximately of the same length of the second joint of the antennæ. The third, fourth and fifth joints subequal, each distinctly longer than the preceding. The first joint approximately half the length of the second joint. The labial palpi four jointed, with the joints subequal. The longest spur of the posterior legs approximately as long as the metatarsus.

Wings.—Hyaline, a rather broad fuscous margin at the tips. The nervures very dark brown, stigma pale brown. Transverse median nervure interstitial with the basal nervure. The third abscissa of the radius a little shorter than the second abscissa and a little longer than the first abscissa. Spurs, mandibles at base, band on the posterior aspect of the posterior tibiæ and the tip of the dorsum of the abdomen yellowish to whitish.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One male collected in June, 1902, by F. H. Snow.

***Aporus ferrugineipes* n. sp.**

The ferruginous femora and tibiæ of the posterior legs help to distinguish this form from its allies.

♀.—6 mm.—Black, covered with a grayish bloom, excepting a band across the pronotum just anterior to the posterior margin, the disk of the scutellum, a band across the first dorso-abdominal segment, all, excepting the apical band on the 2nd, 3rd and 4th dorso-abdominal segments without bloom, as are the apical two abdominal segments, the apical band on segments 2, 3 and 4 with a grayish bloom.

Anterior margin of the clypeus entire, scape approximately as long as the third joint of the antennæ. The second joint of the antennæ half the length of the third. The fourth joint of the antennæ a little longer than the third joint. The succeeding joints subequal. The pronotum with the posterior margin entire. The metathorax laterally in the middle prolonged into distinct short acute processes. The tegument is apparently impunctate.

Color.—Apical half of the mandibles is largely reddish, as are the posterior femora and tibiæ.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female collected in May (F. H. Snow).

Nysson clarconis n. sp.

Related to *albomarginatus*, *mellipes* and *pumilis*.

♂.—7 mm.—*Head*.—Distinctly punctured, the ocelli forming an equilateral triangle about an elevation of the vertex. The distance between the ocelli equal to or a little less than the distance between the posterior ocelli and the nearest eye margin. Third antennal joint as long as the second and a little shorter than the third, beyond which latter the joints are subequal. The clypeus is, along its anterior margin in the middle, produced into a short punctate process. The dorsulum has adjoining shallow punctures giving it an almost reticulated appearance. The mesopleura are sculptured in much the same way. The metathorax has an enclosure that is bounded on each side laterally by an area densely clothed by appressed silvery pubescence. In the median area there is a series of longitudinal grooves that do not extend as such to the apex. Laterally the metathorax at the middle of the junction of the posterior aspect and the pleura is prolonged into a spine which is directed backward, outward and upward. The abdomen has distinct separated punctures, which on the apical segments are almost confluent. The posterior tibiae and apex are wider than the posterior femora. The projections on the apical abdominal segment are a little shorter than the space between them is wide. The color is black. The legs, excepting the tarsi and the coxae and trochanters, which are blackish, the first abdominal segment, excepting the apical yellow margin, reddish. The scape, excepting the yellow spot, the mandibles, excepting the blackish margins and the basal sutures of the second dorso-abdominal segment laterally, and the second, third and fourth ventral abdominal segments basally all brownish.

The posterior margin of the pronotum, the tubercles and the scutellum, apical margin of the first and second dorso-abdominal segments, and a short apical band on each side of the dorso-abdominal segments 3, 4 and 5 yellow.

The black of the insect, as well as the reddish, is more or less covered by a sericeous pubescence which is silvery, excepting on the dorsulum, where it is golden.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One male taken in June by F. H. Snow.

Didineis crassicornis n. sp.

Related to *texanus*, but is a more robust species with thicker antennae.

♂.—6 mm.—Front with fine adjoining punctures. The punctures on the vertex equally fine but distinctly separated. The third antennal joint a little shorter than the fourth. The succeeding joints subequal and none of them especially thickened but cylindrical. The apical joint of the antennae as in *peculiaris*. The wings are distinctly brownish, with the color intensified with a streak through the wings traversing the marginal, second submarginal and third discoidal cells. The second recurrent nervure is inserted further from the insertion of the second transverse cubitus than the first recurrent nervure is inserted from the second transverse cubitus. The nervures are very dark brown, as is the stigma, but the costal nervure of the posterior rings is pale brown. The dorsu-

lum is shining, very finely punctured in much the same way as the head. The pleura are almost rugulose. The metathorax is rugulose to rugose on the posterior aspect, and on the dorsal aspect has a triangular area which is acute and extends almost the entire length of this portion of the metathorax. The sculpture within this area is not distinguishable from the sculptures adjoining this area.

The color is black. The head is reddish castaneous, excepting a black band extending from eye to eye across the vertex in the region of the ocelli, which are surrounded by the black.

The scape is largely blackish. The remainder of the antennæ brownish and testaceous.

The prothorax, tubercles, the greater portion of the femora and tibiæ, and the greater portion of the first and second segments of the abdomen are reddish castaneous. The anterior tarsi are testaceous and the middle and posterior tarsi dark brown.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One male collected by F. H. Snow.

***Trypoxylon regularis* n. sp.**

Related to *apicalis*; the clypeus regular on the anterior margin not at all produced. Metanotum with a rather short deep sulcis on the superior surface.

♀.—*Head* and thorax 4 mm., abdomen missing.

Face along the eye margin with the sculpture obscured by appressed silvery pubescence, otherwise finely granular, with an indistinct median longitudinal line extending from the anterior ocellus to between the insertion of the antennæ where it becomes apparent as a shining raised line. Vertex and cheeks with the sculpture more distinct and shining, with more or less distinguished fine close punctures.

Distance between the posterior ocelli nearly twice as great as that between them and the nearest eye margin. The ocelli forming an equilateral triangle. Joints of the antennæ not well separated, the basal joints especially difficult to distinguish from each other. Third antennal joint distinctly shorter than the fourth, the succeeding joints subequal.

Dorsulum dull granular. Pleura shining, with minute separated punctures. Scutellum more shining than the dorsulum, with fine close punctures. Metanotum shining, finely rugulose, with a longitudinal median rather broad sulcus extending almost the entire length of the sclerite.

Wings transparent, brownish. Nervures and stigma very dark brown. The clypeus obscured in the same way as the lower portion of the face at the eye margin, otherwise the insect is thinly clothed with short whitish pubescence.

Color almost entirely black.

Type.—University of Kansas.

Type locality, Douglas Co., Kansas, 900 ft.

One ♀ taken in June (U. of K. collection, lot 57).

Trypoxylon quintilis n. sp.

Closely related to *clavatum*. The superior face of the metathorax is not appreciably impressed and has longitudinal striæ.

♂.—10 mm.—*Face* below the front with the sculpture hidden by appressed silvery pubescence. Front dullish and rugulose, bisected by a longitudinal median raised line that is most apparent where the silvery pubescence begins and becomes obsolete at the anterior ocellus. The posterior ocelli almost adjoining the eye margin. The space between the latter and the former being approximately one-third or less than one-third as wide as the space between the posterior ocelli. Cheeks shining and apparently impunctate, third segment of the antennæ as long as the two succeeding joints combined.

The sutures of the thorax with a more or less silvery appressed pubescence. With this exception the thorax is rather thinly clothed with rather erect silvery pubescence, which is by far more abundant on the pleura than elsewhere. Dorsulum highly polished and sparsely punctured with rather small, inconspicuous punctures. Pleura also polished, but more distinctly and closely punctured. Scutellum much like the pleura in sculpture. Posterior aspect of the metathorax with a distinct narrow longitudinal median sulcus. Abdomen polished and practically impunctate. Very finely and rather inconspicuously sericeous, with very short pubescence. Wings brownish, nervure and stigma very dark brown, almost entirely black.

Tegulæ brownish. Tarsi brownish, excepting the metatarsus of the posterior legs, which is whitish in the apical half and the second and third tarsal joints of the posterior legs, which are entirely whitish.

The apical tarsal joints, claws and spines black.

Type.—University of Kansas.

One specimen, Douglas Co., Kansas.

One male taken in July, by E. S. Tucker.

Philanthus clarconis n. sp.

Related to *crabroniformis*, from which it can be distinguished by the inequality of the punctuation of the 2nd and 3rd dorsal abdominal segments.

♀.—9 mm.—*Face* below the insertion of the antennæ polished. Clypeus with sparse shallow punctures. The lateral face marks adjoining the clypeus with much closer and finer punctures. The supraclypeal space rather closely indistinctly punctured, with a median longitudinal sulcus that falls short of the superior margin of the clypeus. Front dull, longitudinally striate and roughened, with a short raised line between the anterior ocellus and the supraclypeal yellow mark. Vertex polished and sparsely punctured with rather deep distinct punctures. Cheeks polished and sparsely punctured with smaller punctures than on the vertex. The distance between the posterior ocelli distinctly greater than that between them and the anterior ocellus, and approximately as great as that between them and the nearest eye margin. Third joint of the antennæ approximately as long as the 4th and 5th joints combined. Prothorax polished and sub-

emarginate. Dorsulum highly polished and with sparser, coarser punctures than on the vertex. The parapsidal grooves rather indistinct and occupying approximately the middle third of the dorsulum. Scutellum sculptured in much the same way as the dorsulum. Postscutellum shining and mostly impunctate. Mesopleura shining, closely punctured with deep, well-defined punctures. Metanotum mostly impunctate along the middle. Closely punctured laterally with a longitudinal median sulcus. Metapleura shining, with fine, sparse, indistinct punctures. The dorsal abdominal segments with rather coarse, sparse punctures. The punctures on the first and second abdominal segments with punctures of two sizes interspersed. The succeeding segments punctured in much the same way, but with the punctures not as coarse. Color black. The shining portion of the face yellow, with the supraclypeal mark rather orange. Scape and flagellum black posteriorly, brownish orange anteriorly. Pedicellum entirely black. Mandibles yellowish, with the tips and margins blackish. Spot on the cheeks, the pronotum, the tubercles, and the subtegular spot, two spots on the scutellum separated by a narrow black line, the postscutellum, spot on either side of the metonotum interrupted broad irregular transverse band on the middle of the first dorsal abdominal segment, a transverse band occupying the greater portion of the second dorsal segment, five emarginations on the anterior margin and with two black spots, transverse band on the third dorso-abdominal segment with four emarginations on the anterior margin, transverse band on the fourth segment occupying the greater portion of the segment and almost all of the 5th segment reddish yellow to orange.

Femora at tips, tibiæ, excepting a black spot on the anterior and middle tibiæ behind, reddish.

Tarsi testaceous. Tegulæ yellow, wings yellowish, nervure and stigma testaceous.

Type locality.—Lawrence, Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female collected in June, by F. H. Snow.

Niteliopsis foxii n. sp.

Forms a distinct group, related to *plenoculoides* by its longer pronotum and by the venation. Superficially like *striatipes*, from which it differs in the submedian cell, which is longer than the median, and in the beak-like not gradate median production of the clypeus.

Clypeus in front as in *plenoculoides*. The eyes not so strongly converging to the top. The space between them and the apex is distinctly greater than one-half the space between them at the clypeus. Ocelli forming an equilateral triangle. The distance between the posterior ocelli approximately one and one-half times as great as the distance between the posterior ocelli and the nearest eye margin. There is a slight depression between the lateral ocelli and the tegument adjoining laterally but no furrow reaching forward. Third joint of the antennæ approximately one and one-fourth times as long as the fourth. The fifth joint shorter than the fourth. Dorsulum as in *plenoculoides* appearing rather coarsely granular

and with a slight, broad longitudinal median depression. The pronotum sculptured in much the same way as the dorsulum and with a median longitudinal rather deep narrow groove. Metathorax granulated, and in other respects much the same as in *plenoculoides*, but instead of an impressed median longitudinal line on the dorsal aspect there is a raised line, and approximately half way between this raised line and the lateral margin there is a shallow, longitudinal groove parallel to the raised line.

Tarsal claws as in *plenoculoides*, abdomen as in *plenoculoides*, but the last dorsal segment with a rather indistinct pygidium.

Wings as in *plenoculoides*.

Color.—Head and thorax black, excepting the apex of the clypeus, the mandibles and the tarsi which are more or less brownish.

Abdomen reddish castaneous, tibial spurs whitish. Wings brownish. Nervures very dark brown. Covered all over by appressed and more or less erect silvery pubescence, which in no place obscures the sculpture.

Type.—University of Kansas.

Type locality.—Hamilton Co., Kansas, 3350 ft.

One female collected by F. H. Snow.

***Ancistroma vegetoides* n. sp.**

♀.—12 mm.—Very like *vegeta*. Front with a median shallow longitudinal sulcus extending from the anterior ocellus to the slight eminence between the insertion of the antennæ, which is more finely punctured than the front in the middle. Space between the eyes at top a little greater than half the space between the eyes at base of clypeus. Third joint of the antennæ a little longer than the fourth and approximately as long as the fifth.

Dorsum with the punctures so close that they appear indistinct, and nowhere are they at all sparse. Scutellum is slightly impressed in the middle, longitudinally and more coarsely punctured than the dorsulum. Metathorax as in *vegeta*. Legs and abdomen also as in *vegeta*.

Color.—Almost entirely black. The apical joint of tarsi brownish. Marginal cell at apex forming an acute angle. Wings dark fuscous, with black nervures and stigma. The insect appearing bare, but on close inspection is seen to have an exceedingly short pubescence, which gives the abdominal segments a steel-colored cast.

Type.—University of Kansas.

Type locality.—Clark Co., 1962 ft., Kansas.

One female collected in June, by F. H. Snow.

***Ancistromma zerbeii*.**

In color nearly like *chilopsidus*, from which it differs decidedly in structure and sculpture.

♀.—12 mm.—Anterior margin of the clypeus almost regularly rounded. Neither emarginate nor dentate. Clypeus with distinct deep punctures that are one to three puncture widths apart. Immediately above the clypeus between

the insertion of the antennæ is a roughened triangular area, and above this is an inverted V-shaped eminence, which is polished, and with rounded sides. Between the apex of the eminence, which is toward the anterior ocellus and the anterior ocellus, there is a distinct groove separating the front into two halves. On either side of this groove the front is triangularly elevated and covered with well-separated punctures, which are larger than the punctures on the front nearer the eye margins. Vertex with a V-shaped depression extending from where the posterior ocelli could be imagined to be if present and uniting with a median groove at the apex, thus forming a Y.

The space between the eyes on the vertex approximately one and one-half the distance between the eyes at the base or the clypeus. The third joint of the antennæ a little longer than the fourth and approximately as long as the fifth. Cheeks granular or appearing minutely closely punctured.

Prothorax minutely, closely punctured, the dorsulum finely closely punctured, but the punctures coarser than on the pronotum. Scutellum and postscutellum more closely punctured than the dorsulum. The scutellum more shining than the dorsulum, the postscutellum dull and apparently impunctate.

Metathorax very delicately sculptured with minute striæ. Pygidial area with distinct lateral margins nearly twice as long as wide at base and with sparse distinct punctures.

Color.—Testaceo-castaneous. Head black, excepting the greater portion of the clypeus, mandibles and antennæ, which are castaneous. Mandibles at base and apex, clypeus at base, blackish. Apical two-thirds of flagellum brownish, sutures of the thorax blackish. Sternum black.

The thorax and abdomen more castaneous than testaceous, while the legs are the reverse. Wings yellowish, with the nervures testaceous.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female, taken in June, by F. H. Snow.

***Ancistromma tachysphécoides* n. sp.**

Belongs near *chilopsidis*, from which it is very different.

♂.—8 mm.—Anterior margin of the clypeus rounded, entire. Front, along the middle, with distinct, deep, separated punctures and shining. Along the eye margins the front is more closely punctured and rather opaque. The occiput punctured in much the same way as the middle of the front. From between the insertion of the antennæ to the anterior ocellus there is a shallow, rather indistinct channel. Posterior to the ocellar field there is a "V"-shaped groove. The distance between the eyes across the vertex is about three-fourths ($\frac{3}{4}$) as great as the distance between the eyes at the base of the clypeus. The third antennal joint is as long as the fourth and the fourth as long as the fifth. The scape is approximately as long as the third and fourth joints of the antennæ combined.

The sculpture of the dorsulum is approximately as in *vegeta*. Legs spinose as in *vegeta*.

The abdomen is tessellate, practically impunctate. The last dorsal segment, however, with rather distinct shallow punctures. The terminal ventral segment

truncate. The head and thorax black, tegulae and nervures and stigma of wing testaceous, otherwise the wing is yellowish transparent, with a brownish tint. The legs are a brownish testaceous, excepting the coxae, trochanters and the greater portion of the middle femora, which are black or blackish. The posterior femora brownish at base. Abdomen concolorous with the posterior tibiae.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One male collected in May by F. H. Snow.

Ancistromma paenerugosa n. sp.

Superficially like the black form of *rugosa*, but differs in sculpture, notably in the more shining mesonotum and in the less distinct punctures on the scutellum.

♂.—8 mm.—Anterior margin of the clypeus rounded and entire. Front and vertex much the same as in *tachysphecoides*.

The depressions or furrows, however, distinct. Space between the eyes at top approximately three-fourths the distance between the eyes at base of clypeus. First joint of the antennae as long as the second and third joints combined. The second joint two-thirds the length of the third, and the third approximately as long as the fourth, and the fourth a little longer than the fifth. Dorsulum shining and compactly punctured. Scutellum with a slight median longitudinal depression. Metathorax above granular and rugulose. To some extent transversely striate, with at least three longitudinal, rather indistinct ridges, that are parallel and close together. The dorsal aspect of the metathorax slightly overhanging the posterior aspect, which has a median longitudinal sulcus and is granular. Abdomen compactly punctured with small shallow punctures. Entirely black, with the following exceptions: the labium testaceous, tarsi brownish, costal nervure brownish testaceous, stigma very dark brown, the nervures dark brown testaceous, otherwise the wing is transparent, with a brownish blackish tint.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One male collected in June, by F. H. Snow.

Tachysphex crassiformis n. sp.

♀.—7 mm.—Distinguished from *antennatus*, its nearest ally, chiefly by the more robust form and distinctly margined pygidial area. Anterior margin of the clypeus as in *antennatus*. Front finely granulated, except near the anterior ocellus, where it is sparsely punctured. Vertex finely and closely punctured. Space between the eyes across the vertex approximately one-third the distance between the eyes at base of clypeus. A deep rather arcuate transverse sulcus between the eyes on the vertex.

Connected with the ocellar space by a shallow rather narrow groove. First joint of the antennae nearly as long as the second, third and fourth joints combined. The second joint half the length of the third, and third joint approximately as long as the fourth.

Dorsulum finely and closely punctured along the middle. More polished and with the punctures sparse. Scutellum uniformly, rather closely punctured. The metathorax above finely granulated, the metapleura distinctly striated. The posterior aspect of the metathorax has the metanotum somewhat overhanging in the form of a ridge. The posterior aspect of the metanotum is more closely striated than the metapleura, and on the basal half has a deep oval depression. Pygidial area a little more than twice as long as wide at base and with sparse, small, shallow punctures. Head and thorax black. Mandibles and tarsi more or less brownish. Wings with a faint brownish tinge, nervures brown, stigma brownish testaceous. Abdomen testaceo-castaneous, more or less covered with silvery, appressed pubescence, which is more conspicuous on the lower half of the face, on the pleura, margins of the thorax, metathorax and along the apical margins of the abdominal segments and laterally when held in certain lights.

Type.—University of Kansas.

Type locality.—Hamilton Co., 3350 ft., Kansas.

One female, collected by F. H. Snow.

Tachysphex clarconis n. sp.

Related to *terminatus*.

♀.—7 mm.—Anterior margin of clypeus as in *terminatus*. Front finely granulated, the sculpture practically obscured by the rather dense appressed silvery pubescence. The occiput between the eyes somewhat depressed, making a shallow emargination. Space between the eyes at top a little more than half the distance between the eyes at the bottom. Third joint of the antennæ approximately three-fourths the length of the fourth joint. The fourth joint apparently a little longer than the fifth, the fifth and succeeding joints subequal. Dorsulum shining, with small distinct almost adjoining punctures. Pygidial area less distinctly punctured than the dorsulum and with the punctures well separated.

Color.—Black. Abdomen reddish, with the venter brownish.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female collected in May, by F. H. Snow.

Tachysphex intermedius n. sp.

Related to *punctifrons* and *aethiops*.

♂.—8.5 mm.—Anterior margins of the clypeus rounded, having no large tooth laterally. Front dullish, very finely roughened and appearing punctate. A shallow groove extending the greater distance between the insertion of the antennæ and the anterior ocellus along the middle line. The distance between the eyes above approximately as great as one-half the distance between the eyes below. Third joint of the antennæ a little shorter than the fourth, the fourth and succeeding joints subequal. Dorsulum shining and rather indistinctly punctured, the punctures well separated. The anterior third along the middle line there is a longitudinal elevation. Scutellum shining and punctured in much the same way as the dorsulum. Metathorax dullish and apparently impunctate,

though appearing finely roughened. Abdomen shining, indistinctly, rather closely punctured. The head, thorax and abdomen are more or less covered with thin, erect, whitish pubescence. The erect pubescence of the abdomen being confined to the venter and basal dorsal segment. The legs and the abdomen are conspicuously more or less covered with appressed silvery to silvery, with a gold tint pubescence.

Color.—Almost entirely black. Tibial spurs brownish testaceous. The tarsæ brownish.

Type.—University of Kansas.

Type locality.—Douglas Co., Kansas, 900 ft.

One male, collected by F. H. Snow.

***Diodontus brunneicornis* n. sp.**

Related to *rugosis*, from which it is easily distinguished by the dull dorsulum and the pale brownish antennæ.

♂.—35 mm.—Clypeus anteriorly very slightly emarginate. Front subopaque appearing granular and impunctate. The ocelli rather equidistant. The distance between the posterior ocelli approximately as great as that between them and the nearest eye margin. The vertex and occiput with apparently the same sculpture as the front. The antennæ rather robust, and the third joint a little shorter than the fourth, the fourth and succeeding joints subequal. Between the sixth and the terminal joint the under side of the antennæ appears reddish.

Dorsulum subopaque, with minute, almost adjoining punctures. The pleura indistinctly punctured and appearing roughened. The mesopleura rather rugulose. Metanotum distinctly rugulose, with two indistinct channels down the middle. The posterior face of the metathorax also rugulose, but not spinose. Covered with a very short, more or less silvery pubescence. The mandibles yellowish, excepting at tips, where they are brownish translucent. Scape and pedicellum black or blackish.

Femora at tip, tubercles, tibiæ and tarsi yellow. Tegulæ testaceous, as are the spurs. The wings with a faint brownish tint, stigma and nervures more or less dark brown. In other respects this insect is black.

Type.—University of Kansas.

Type locality.—Sedgwick Co., Kansas, 1300 ft.

One male taken in Sept., by E. S. Tucker, U. of K., lot 361.

***Passalæcus equalis* n. sp.**

Antennæ slender, as in *annulatus*, but the third joint as long as the fourth.

♀.—3.5 mm.—Frontal impression indistinct. The distance between the posterior ocelli approximately equal to the distance between them and the nearest eye margin. Apical joint of the antennæ hardly longer than the preceding joint. Dorsulum shining, very finely closely punctured.

Scutellum and postscutellum more shining and more distinctly punctured than the dorsulum. Metathorax rounded and rugulose. Abdomen polished, pubes-

cence very short and nowhere conspicuous. Mandibles, except the tip, where they are brownish, scape, sutures of the antennæ and tubercles yellow. Legs, excepting the coxæ, which are black, testaceous and partly brownish. Wings transparent, tinted with brown, and stigma and nervures are very dark brown.

Type.—University of Kansas.

Type locality.—Douglas Co., Kansas.

One female collected by E. S. Tucker.

***Crabro clarconis* n. sp.**

Related to *hilaris*, from which it differs in the sculpture of the thorax.

♀.—9.5 mm.—Head dull, finely roughened. Third joint of the antennæ a little shorter than the two succeeding joints combined. Pronotum bluntly dentate laterally. Dorsulum with close, rather indistinct punctures on a shining surface. Pleura highly polished, the mesopleura with fine, rather sparse punctures, the metapleura partly impunctate, and partly with shallow indistinct punctures. The dorsal aspect of the metathorax is dull and roughened, but has a median longitudinal channel traversing it which is broader at base than at apex and a little more than twice as long as wide at base and shining. The posterior aspect of the metathorax has a rather irregular median longitudinal sulcus and is somewhat reticulate and shining.

The posterior margin of the anterior tibiæ with three rather slender spines, the posterior margin of the middle tibiæ with seven stouter spines, the posterior margin of the posterior tibiæ with six or seven stout spines.

First abdominal segment polished, the succeeding segments shining, but with rather a subtle sculpture. Pygidium margined laterally, closely or coarsely punctured, or pitted with the sculpture of the apical half at least, obscured or almost obscured by stiff appressed golden hairs or bristles.

The pygidium about one and a half times as long as broad at base.

Color.—Black. Mandibles, excepting the tips, which are blackish, the clypeus, excepting the brownish apical margin, the scape, pedicellum anteriorly, the pronotum, excepting a median longitudinal black line, the tubercles, the episternum, mesopleuralis, the anterior margin of the tegulæ, the extreme base of the wings, the scutellum and a dot on each side anteriorly, and a line on each side of the middle of the postscutellum, the apical third or more of the anterior and middle femora, the anterior and middle tibiæ and metatarsi, the anterior aspect of the posterior femora, a transverse undulating band on the first dorsal abdominal segment, an elongate spot on ventral abdominal segments 2, 3 and 4, an interrupted band on the second and third dorsal abdominal segments, an apical band on the fourth and fifth dorsal abdominal segments, yellow.

The greater part of the outer and posterior aspects of the posterior femora and the tarsi brownish. The anterior and middle tibia each with a black spot on the internal aspect.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female collected in June by F. H. Snow.

Notoglossa pænemarginatus n. sp.

Closely related to *emarginatus*, from which it differs in the narrow more slender spine, also resembles *dilutus*.

Scutellum and *postscutellum* with a median longitudinal carina. The spine of *postscutellum* is not much longer than the distance between the tips of the prongs, which are slightly divergent, extending outward, backward and somewhat downward, but not extending far beyond the line running parallel to the spine at its base. The *squamæ* nearly as large as the spine and with a very short spine on the external margin directed backward and slightly inward.

Color.—Black. Mandibles, excepting the apical half, which is brownish, the outer third of the pronotum, the tubercles, spot at apex of anterior and middle femora, the outer aspect of the anterior tibiæ, spot at base of middle and posterior tibiæ and bands at the margin of the outer third of the first and second dorsal abdominal segments yellow, scape at apex, apical two-thirds of the flagellum, anterior aspect of the anterior tibiæ and tarsi more or less brown. The middle and posterior tibiæ very dark brown. The tegulæ and bases of the wings are brownish testaceous. The *squamæ* are yellowish testaceous. The penultimate dorsal abdominal segment is brownish apically and the apical abdominal segment is reddish brown.

Type.—University of Kansas.

Type locality.—Clark Co., Kansas, 1962 ft.

One female taken in June by F. H. Snow.

Notoglossa calligaster n. sp.

Related to *abdominalis*.

♀.—5 mm.—Dorsulum closely, rather finely punctured. Segments of the male abdomen 4-6 inclusive with subequal, cylindrical, and rather slender inconspicuous spines. Head closely distinctly punctured and shining. Thorax, excepting the metathorax, punctured and shining in much the same way as the head. The metathorax finely roughened and subopaque. Abdomen more finely and closely punctured than the head. The spine of the *postscutellum* is narrowly emarginate, with the prongs directed upward, backward and inward. The *squamæ* are much as in *emarginatus*, but the spines thereof are larger and more prominent. Pubescence of face practically obscuring the sculpture. The appressed pubescence of the mesopleura silvery and almost obscuring the sculpture.

Color.—Black. Mandibles, except at tips, where they are brownish, anterior and middle tibiæ, at least anteriorly, the anterior tarsi, tubercles, spot on either side of the pronotum yellowish.

The *squamæ* and spine whitish testaceous. The anterior and middle tibiæ posteriorly more or less brown. The posterior tibiæ, the middle and posterior tarsi dark brown. The abdomen is mostly brownish, the third and fourth dorsal abdominal segments are mostly blackish, and the first dorsal abdominal segment is testaceous, tinted with brownish.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200 ft.

One female taken by F. H. Snow.

In structure and sculpture a male paratype from Hamilton Co., Kansas, is essentially the same as the type, but in this specimen the maculations on the pronotum are more prominent and the abdomen is mostly blackish. The first and sixth and seventh abdominal segments are brownish-testaceous to brownish. Along the margins of the first and second dorsal abdominal segments there is a rather distinct band of yellow. ♂.—4 mm.

Notoglossa tænigaster n. sp.

May be the female of *cockerelli*, but differs as follows: Front without tubercle, mesonotum anteriorly not carinate. Abdominal bands entire, tibiæ without a whitish stripe externally.

♀.—8 mm.—*Head*, thorax and abdomen sculptured in much the same way as in *calligaster*. Each squama has a very distinct lateral spine, which is directed backward and slightly inward and is almost perpendicular to the posterior margin of the squama. The spine of the postscutellum is very narrowly emarginate, nearly twice as long as broad at apex and with the spines or processes thereof hardly departing from an imaginary line prolonged from the sides of the spine. It must be remarked, however, that in this specimen the prongs of the postscutellar spine are not equally disposed, which would indicate that the spine is abnormal. The mandibles are brownish, excepting the apex, which is blackish, the scape brownish at apex. Pedicellum and flagellum mostly brownish, with yellowish brown beneath. A short line on either side of the pronotum, tubercles, spotted base of anterior tibiæ, spotted apex of anterior femora, spot on either side of the scutellum, a line on the outer aspect of the apical two-thirds of the middle femora, a line on the base of the posterior tibiæ and transverse band at apex, dorsal abdominal segments 1-4 inclusive. Luteous.

The anterior tibiæ are brownish testaceous, the anterior tarsæ brownish, excepting the pulvilli, which are black. The squamæ are partly whitish, testaceous and partly luteus. The spine of the postscutellum brownish. The middle and posterior tibiæ and tarsi and spines are very dark brown. Ventrally the abdomen is black, except the posterior half of the fourth segment, the fifth and sixth segment, which are brownish testaceous, as are also the fifth and sixth dorsal abdominal segments.

Type.—University of Kansas.

Type locality.—Morton Co., Kansas, 3200.

One female taken in June, 1902, by F. H. Snow.

Oxybelus exclamans n. sp.

Related to *packardii*. Differs from all the North American species of *Oxybelus* in the mesonotum, which is so closely and confluent punctured as to appear rugose.

♀.—6 mm.—*Face*, with the sculpture obscured by an appressed silvery pubescence. The clypeus with a median longitudinal polished keel which is pro-

longed so as to make the anterior margin of the clypeus appear beaked. The vertex and cheeks are closely confluent punctured, but shining, and the latter covered with a rather dense appressed silvery pubescence. The dorsulum has a rather abundant appressed silvery pubescence, which does not, however, obscure the sculpture. The scutellum is sculptured and ornamented in much the same way as the dorsulum. The squamæ are prolonged posteriorly into a rather blunt angle, which is directed backward and inward. The spine of the postscutellum has parallel sides, and the width of the apical truncation is a little less than one-third the length of the spine. The mesopleura, excepting for a large space on the anterior half, which is polished and very sparsely punctured, are punctured in much the same way as the scutellum, and also with appressed silvery pubescence. The dorsum of the metathorax has the sculpture obscured by appressed silvery pubescence. The metapleura shining, mostly granular and partly smooth. The posterior aspect of the metathorax is granular and has a median rather tear-shaped polished sulcus. The abdomen is shining and rather closely, distinctly punctured. On the first dorsal abdominal segment there is a median, longitudinal shallow sulcus. The first dorsal abdominal segment is rather conspicuously clothed with appressed silvery pubescence, which forms rather conspicuous bands on the margins of the second, third and fourth dorsal abdominal segments. The fifth dorsal abdominal segment is rather inconspicuously pubescent. The pygidial area has appressed golden hairs or bristles.

Color.—Black. The flagellum brownish orange, the pedicellum and apex of scape brownish. Mandibles mostly blackish, partly castaneous. Pronotum with a yellow mark on either side. Tubercles, the anterior tibiæ and metatarsi on the inner aspect, the middle and posterior aspect, and the posterior margin of the first dorsal abdominal segment with a mark on either side more or less yellow. The anterior tarsi mostly yellowish, the anterior tibiæ, the middle and posterior tarsi brownish, middle tibiæ brownish. The apical margins of the second, third and fourth dorsal abdominal segments brownish yellow. The fourth, fifth and sixth abdominal segments brownish to castaneous. The squamæ yellowish, and yellowish testaceous, the apical half of the spine of the postscutellum translucent yellowish.

Type.—University of Kansas.

Type locality.—Morton Co., 3200 ft., Kansas.

One female collected by F. H. Snow.

TEXAS.

ICHNEUMONIDÆ.

***Idecthis pænerivalis* n. sp.**

In structure very like *Limnerium rivalis* Cress.; it is readily distinguished from that species by the almost entirely black abdomen.

♀.—6 mm.—*Head*.—As in *Limnerium lawrencei*, excepting the antennæ, which could not be compared because they had been lost through breakage.

Thorax with the same characters, with one exception, as those in italics in the description of *L. lawrencei*, otherwise as follows: petiole of the areolet a little

longer than the shortest side of the areolet; areola confluent with the petiolarea, pentagonal in outline a little shorter than wide, the upper sides of the pentagon nearly as long as the areola is wide at its junction with the petiolarea, the sculpture of the areola is granular and shining, with a few slight wrinkles, the basal area forming almost an equilateral triangle, greatest width of the petiolarea nearly half the length of the same, its sides broken or angled in or near the middle, the sculpture of the petiolarea more distinctly granular and dull than that of the areola, the surface depressed, forming a very shallow channel, external and external median areas nearly smooth, dull and distinctly separated by an oblique raised line, internal and angular areas well defined, shining and rugose, the latter area nearly one-half the size of the former and almost forming an equilateral triangle; legs, including the coxæ, almost entirely ferruginous, trochanters of the anterior and middle legs and the distal coxæ of the posterior legs yellow, the proximal trochanter of posterior legs testaceous, with a blackish tint, tarsi and knees of anterior and middle legs and extreme base of posterior tibiæ more or less yellowish, first and second tarsal joints with a broad apical brownish band, the succeeding joints of the tarsi and the claws almost entirely brown, posterior tibiæ tinted with brown and with the apex externally dark brown, the basal three-fourths of metatarsus, basal third of the next succeeding joint and extreme apex of the third and fourth joints of the tarsi of the posterior legs sort of a brown-tinted cream color.

Abdomen.—Black, basal half of venter yellowish, only the second and third dorsal segments with ferruginous, the ferruginous being confined chiefly to the sides, the ferruginous of the sides of the second segment, however, being connected on the dorsum of the segment by a band. Sheaths black, the ovipositor black, except at apex, where it is brown and nearly as long as the abdomen.

Type.—University of Kansas.

Type locality.—Galveston, Texas.

One ♀ taken in May at Galveston, Texas.

♂.—5 mm.—Very like the female, apparently the only important differences are as follows: areolet with the petiole about as long as the shortest side, like in the ♀, not equilateral and oblique in position; areolet of the metathorax separated from the petiolarea by a distinct ridge, the angular area small and lunate. Antennæ twenty-eight jointed, first joint of the flagellum as long as the scape. the antennæ entirely black.

One specimen with the same data as the ♀.

Type.—University of Kansas.

Campoplex expertus Cress.

One ♀ 9 mm. long, taken in May, at Galveston, Texas, by F. H. Snow.

Amorphota confluens n. sp.

Related to *Limnerium*? *hostilis*, *distinctus* and *affinis*, but structurally distinct from each.

♀.—7 mm.—Head.—*With the anterior aspect finely sculptured, dull; clypeus rather shining and distinctly closely punctured; cheeks shining, minutely sculptured and about half as wide as on eye, the eye about as wide as the space between the eyes at base of clypeus; malar space nearly as high as the pedicel is long; ocelli forming a triangle, the anterior ocellus about as far from the posterior ocellus as a posterior ocellus is from the nearest eye margin, the space between the posterior ocelli about one and one-half times as great as distance between the lateral and anterior ocelli; antennæ twenty-nine jointed, the first joint of the flagellum about as long as the scape and pedicellum together; almost entirely black, only the scape, pedicellum and mandibles partly pale, the former two chiefly yellowish and brown, the latter yellow, brown at apex; pubescence silvery, densest on the face, where in certain lights it rather obscures the sculpture.*

Thorax—Dorsulum sculptured much like the face, not so conspicuously clothed with pubescence, the pubescence very short and somewhat tinted with yellowish; pleura chiefly with rather distinct adjoining punctures on a quite shining surface; basal area forming a trapezoid about twice as wide at base as at apex, the basal transverse carina being about one-half the length of this area, areola confluent with the petiolarea, from the carina separating the external from the external median area to the basal transverse carina, the areola is almost an equilateral triangle, region of the petiolarea impressed and transversely rugulose, petiolarea partly confluent with the internal area, the internal area wrinkled, shining and separated from the angular area, which is conspicuous and almost a triangle, external median area more coarsely sculptured than the external area, from which it is separated by downward arched carina, spiracular area and middle pleural areas confluent, the spiracle almost adjoining the pleural carina and united therewith by a broad elevation of the tegument, excepting its appendages, the thorax is black; wings hyaline, the nervures brown, rather brownish testaceous, the stigma testaceous, tinted with brown, wing nervures at base of wing and tegulæ yellow, areolet a trapezium, petiolate or subpetiolate, the petiole almost wanting, not more than half the length of the shortest side of the areolet, anterior and middle coxæ yellow and brown, posterior coxæ black, with reddish on the apical half, all trochanters yellow, except the proximal pair of posterior legs, which are brown, all femora ferruginous, anterior and middle tibiæ testaceous-ferruginous beneath, yellowish above, posterior tibiæ brown above, ferruginous beneath, yellowish above, posterior tibiæ brown above, ferruginous beneath, tarsi more or less brown, pale at base, tibial spurs testaceous.

Abdomen.—Ferruginous, petiole black, as is the second segment, excepting an illdefined subapical band of ferruginous, greater part of basal half of the third segment black, fourth segment partly blackish at base, venter chiefly yellow; ovipositor enveloped by the black sheaths, the protruding portion about as long as the petiole.

Type.—University of Kansas.

Type locality.—Galveston, Texas.

One specimen collected in May (F. H. Snow).

Amorphota confluens mutation *a*.

Like *confluens*, this is related to *Limnerium* ? *hostilis*, *distinctus* and *affinis*, but structurally distinct from each.

♀.—5 mm.—*Head*.—As in *confluens* to the extent of the italicized characters in the description of that species; antennæ twenty-six jointed, the pedicellum brownish in part, the scape yellowish testaceous and brown; mandibles yellow, reddish brown at apex, palpi yellowish. In other respects essentially like *confluens*, dorsum of abdominal segments beyond the third stained with brownish.

One specimen, with the same data as *A. confluens*.

***Amorphota confluens* mutation *b*.**

♀.—A little longer than mutation *a*, but colored almost the same; areolet distinctly petiolate, the petiole about as long as the shortest side of the areolet; antennæ twenty-seven jointed.

One specimen, same data as type.

♂.—Differs from the ♀ as follows: eyes narrower, about equal to three-fourths the distance between the eyes at base of clypeus, the cheeks about two-thirds as wide as the eye; antennæ thirty-one jointed, proximal trochanter of posterior legs about entirely black.

One specimen, same data as type.

***Amorphota confluens* mutation *c*.**

♀.—Differs from mutation *b* in having the areolet just sessile, the areolet retaining its trapezium shape as in the type.

One specimen, same data as type.

♂.—Specimen a degree removed from sessile, *i. e.* slightly petiolate (antennæ broken). Anomalous in having an ovoid opening in each discocubital cell.

One specimen, same data as type.

***Amorphota galvestonensis* n. sp.**

Related to *basilaris*, but very distinct in size, structure and color.

♀.—4 mm.—*Head*.—As usual, with the anterior aspect dull, the posterior aspect more or less shining, minutely sculptured; face, clypeus and malar space minutely granular, inconspicuously clothed with silvery pubescence, appearing bare; cheeks about half the width of the eye, the latter a little less than two-thirds as wide as the space between the eyes at base of clypeus; ocelli arranged about as in *confluens*; malar space about as high as the scape is long, antennæ twenty-six jointed, scape and pedicellum together as long or a little shorter than the second joint of the flagellum, distinctly shorter than the first joint; black, excepting the appendages; antennæ very dark brown, with the scape, pedicellum and first joint of the flagellum more or less pale brown, mandibles yellow, reddish brown at apex.

Thorax with the usual similarity to the head in sculpture; basal area forming an equilateral triangle or very nearly, areola confluent with the petiolarea and transversely rugulose, if complete, the areola would be about twice as long as wide, and except for the basal apex it is spatulate, external area granular, shining and separated from the external median area, which is rugulose, dullish by a more or less distinct raised line, angular area apparently confluent with the rather coarsely wrinkled internal area, spiracular and middle pleural areas con-

fluent, the spiracle joined to the pleural carina by an elevation of the tegument; nervures dark brown, stigma brownish testaceous, areolet a trapezium, just sessile; anterior coxæ reddish brown and infuscated, middle and posterior coxæ almost entirely black, trochanters almost entirely yellow, anterior and middle femora testaceo-ferruginous, posterior femora ferruginous, tibiæ and tarsi of anterior and middle legs yellowish testaceous, partly tinted with brown, the apical tarsal joint and claws of all legs brown; posterior femora ferruginous, posterior tibiæ brownish testaceous beneath, above they are brown on basal fourth and apical third between the tegument is sort of a brownish yellow, most of the tarsi of posterior legs brown, pale brown at base.

Abdomen.—Ferruginous, first segment and second segment black, except an apical band united with a partial lateral band which are ferruginous, third, fourth and fifth dorsal segments with a large discal blackish spot on basal two-thirds; ovipositor reddish brown, covered partly by the black sheaths and protruded for a distance that is less than the apical width of the abdomen.

Type.—University of Kansas.

Type locality.—Galveston, Texas.

One specimen taken in May by F. H. Snow.

***Amorphota ferruginosa* n. sp.**

Related to *Limnerium* ? *rivalis* Cress., but can readily be distinguished by the channeled metathorax.

♀.—5.5 mm.—*Head* in general form nearly as in *galvestonensis*, but differs in the following details: malar space distinctly shorter than the length of the scape about as high as the mandible is wide near the apex, i. e. where the teeth spring from the mandibles; antennæ twenty-eight jointed, flagellum brown, with the first joint about as long as the scape and pedicellum together, the latter two being yellow beneath, mandibles yellowish brown at apex, palpi yellowish testaceous.

Thorax.—With the same relation to the head, in sculpture, as usual; basal area about twice as broad at base as at apex, and about twice as long as wide at apex, areola nearly smooth, confluent with the transversely wrinkled petiolarea, if complete the areola would be hexagonal with the sides, excepting the basal transverse carina, nearly subequal, external and external median areas nearly smooth and separated by a very distinct straight carina, internal area with a few coarse wrinkles, the angular area lunate and not conspicuous, spiracular and middle pleural areas almost completely confluent, the spiracle united with the pleural carina by a carina; anterior and middle legs almost entirely testaceous, apical tarsal joints and claws of all the legs brown, posterior coxæ ferruginous, the trochanters, femora and tibiæ of posterior legs testaceo-ferruginous, the tarsi of posterior legs testaceous.

Abdomen.—Ferruginous, petiole black, except an apical ferruginous band, basal two-thirds of second segment blackish to a great extent, and a basal band on the third segment black; ovipositor protruded for a distance equal to two-thirds the length of the abdomen.

Type.—University of Kansas.

Type locality.—Galveston, Texas.

One specimen taken in May, by F. H. Snow.

Porizon facilis Cress.

One ♀ with a nearly equilateral pentangular areola, and four ♂ showing slight variation in the form of the areola and in the strength of the carinæ bounding the same.

Taken in Galveston, Texas, in May, by F. H. Snow.

Trogomorpha trogiformis (Cress.).

One ♂ taken in May at Galveston, Texas, by F. H. Snow.

CHALCIDOIDEA.

EULOPHIDÆ.

Tetrastichus.

PERILAMPIDÆ.

Perilampus platygaster Say.

Two specimens Galveston, May (F. H. Snow).

EURYTOMIDÆ.

Eurytoma.

CHALCIDIDÆ.

Spilochalcis delira Cress.

One specimen, Galveston, May (F. H. Snow).

Spilochalcis torvina Cress.

Two specimens, Galveston, May (F. H. Snow).

TORYMIDÆ.

Syntomaspis.

CYNIPOIDEA.

FIGITIDÆ.

Eucoila impatiens Say.

One specimen, Galveston, May (F. H. Snow).

Anacharis melanoneura Ashm.

Three ♂ Galveston, May (F. H. Snow).

PROCTOTRYPOIDEA.

SCELIONIDÆ.

Scelio hyalinipennis Ashm.

Male, Galveston, Texas, May (F. H. Snow).

Seelio striaticollis Brues, sp. nov.

"*Female*.—Length 3–4 mm.—Black, except the legs (exclusive of the coxæ) and antennal scape which are rufous; clothed with sparse glistening pubescence. Head nearly three times as wide as thick antero-posteriorly; rather shining above; almost smooth on the vertex; front longitudinally rugose, with a few large punctures. Face with oblique striæ on each side which meet above on the median line and fade out below near the base of the antennæ. Antennal scape stout, rufous, flagellum dark brown. Pedicel nearly twice as long as the first flagellar joint; second flagellar joint quadrate, the following transverse; club stout, as usual. Cheeks smooth, mandibles brownish basally. Mesonotum and scutellum longitudinally striate, smoother laterally, the parapsidal furrows well marked, except at the extreme front margin. Metanotum finely sculptured, slightly longitudinally rugose, its lateral angles not evident. Petiole twice as wide as long; third segment one and one-half times as long as the second. Abdomen above finely striate; more coarsely so on the petiole. Legs rufous, coxæ brownish black. Wings with a brownish cast, the submarginal nervure scarcely discernible; stigma very faint, without any indication of a stigmal vein."

"Two specimens; Galveston, Texas, May, 1904, F. H. Snow. No. 1323."

"This species comes closest to *S. ædipodæ* Ashm., from which it is distinguished by the striated sculpture of the head and thorax."

VESPOIDEA.

MUTILLIDÆ.

Mutilla creusa Cress.

Female, Galveston, May (F. H. Snow).

Mutilla onjaca Blake.

Male, Galveston, May (F. H. Snow).

Mutilla promethea Blake.

Male, Galveston, May (F. H. Snow).

Mutilla dubitata Sm.

Female, Galveston, May (F. H. Snow).

SCOLIIDÆ.

Elis quadriguttata Fabr.

Female, Galveston, May (F. H. Snow).

MYZINIDÆ.

Plesia sexcincta Fabr.

Two ♀, ♂, Galveston, May (F. H. Snow).

EUMENIDÆ.

Ancistrocerus fulvipes Sauss.

Galveston, May (F. H. Snow).

Odynerus hidalgi Sauss.

Galveston, May (F. H. Snow).

VESPIDÆ.

Polistes bellicosus Cress.

Galveston, May (F. H. Snow).

CEROPALIDÆ.

Cryptocheilus pompilius Cress.

Galveston, May (F. H. Snow).

Anoplius (Sophropompilus ?) philadelphicus Lep.

Galveston, May (F. H. Snow).

Anoplius (Sophropompilus ?) æthiops Cress.

Galveston, May (F. H. Snow).

Anoplius (Entypus) marginatus Say.

Galveston, May (F. H. Snow).

Anoplius (Pompilius) apiculatus Sm.

Galveston, May (F. H. Snow).

Anoplius (Arachnoproctonus) ferrugineus Say.

Galveston, May (F. H. Snow).

Anoplius cylindricus Cress.

Galveston, May (F. H. Snow).

SPHECOIDEA.

NYSSONIDÆ.

Alyson melleus Say.

Galveston, May (F. H. Snow).

PHILANTHIDÆ.

Cerceris venator Cress.

Galveston, May (F. H. Snow).

LARRIDÆ.

Larra analis Fabr.

Galveston, May (F. H. Snow).

BEMBECIDÆ.

Bembix cinerea Hdl.

Galveston, May (F. H. Snow).

Stictia carolina Fabr.

Galveston, May (F. H. Snow).

PEMPHREDONIDÆ.

Neofoxia suffusa Fox.

Galveston, May (F. H. Snow).

CRABRONIDÆ.

Crabro scaber Lep. and Brulle.

Galveston, May (F. H. Snow).

Crabro texanus Cress.

Galveston, May (F. H. Snow).

OXYBELIDÆ.

Notoglossa emarginata Say.

Galveston, May (F. H. Snow).

APOIDEA.

STELIDÆ.

Cœlioxys slossonæ Vier.

Galveston, May (F. H. Snow).

XYLOCOPIDÆ.

Xylocopa purpurea Cress.

Galveston, May (F. H. Snow).

Xylocopa virginica Drury.

Galveston, May (F. H. Snow).

BOMBIDÆ.

Bombias scutellaris Cress.

Galveston, May (F. H. Snow).

ARIZONA.

ICHNEUMONIDÆ.

Nototrachys reticulatus Cress.

One ♂ from Oak Creek Canyon, Arizona, 6000 ft., taken in July, by F. H. Snow.

Nototrachys ejuncidus Say.

One ♀ from Oak Creek Canyon, Arizona, 6000 ft., taken in August, by F. H. Snow.

Thyreodon morio Fabr. race ? **transitionalis** n. race.

♀.—Differs from the typical eastern form in having the basal third of the marginal cell, the greater portion of the disco-cubital cell in the anterior wings and the basal third of the marginal cell of the posterior wings yellow transparent, the anterior tibiæ and the first four tarsal joints brown.

Type.—University of Kansas.

Type locality.—Oak Creek Canon, Arizona, 6000 ft.

One female collected in July, by F. H. Snow.

Theronia fulvescens mellipennis Vier.

One ♂, 15 mm. long, from Oak Creek Canon, Arizona, 6000 ft., taken in August, by F. H. Snow.

Cryptus consobrinus n. sp.

Related to *C. americanus*, from which it is readily distinguished by the uniformly black legs and dark smoky wings.

♀.—13 mm.—Essentially as in *americanus*, differing chiefly as follows: areolet nearly a circle; metanotum with the carinæ very indistinctly defined.

Type.—University of Kansas.

Type locality.—Oak Creek Canon, Arizona, 6000 ft.

One female collected in July, by F. H. Snow.

Ichneumon (Eurylabus) arizonensis Vier.

One ♀ from Oak Creek Canon, Arizona, 6000 ft. (type locality), taken in August by F. H. Snow.

Amblyteles nubivagus Cress.

One ♂ taken at the base of Humphrie's Peak, Arizona, 9500 ft. (F. H. Snow).

Ichneumon maurus Cress.

One ♀ taken in July in Oak Creek Canon, Arizona, 6000 ft., by F. H. Snow.

Ichneumon hemimelanarius n. sp.

Belongs with *I. cæruleus*, etc., but readily distinguished by the black antennæ, black abdomen and black wings, the latter having a violaceous reflection.

♂.—16 mm.—*Head*.—Chiefly cæruleous, face with adjoining and separated punctures, with a broad yellow band on each side, occupying one-third of the face and adjoining the eye, clypeus with distinctly separated and adjoining punctures; antennæ more than forty-two jointed and entirely black.

Thorax.—Entirely cæruleous, areola rugulose, almost circular, but distinctly emarginated on the basal margin, petiolarea a deep groove, bounded by parallel distinct carinæ, external median area enclosed by strong carinæ, very coarsely wrinkled, the outer angle forming a blunt tooth; nervures blackish, the abscissa between the recurrent nervure and the second transverse cubitus a little shorter than the second abscissa of the radius; coxæ, trochanters and greater part of femora cæruleous, anterior femora in front with a yellowish stripe, middle femora with a yellowish mark near apex on the anterior aspect, anterior and middle tibiæ and tarsi mostly yellow, with a black to brown stripe on the posterior aspect, the stripe not so distinct on the tarsi, posterior tibiæ with the anterior aspect of the basal half chiefly yellow, posterior legs with the second tarsal joint, partly the third, fourth and fifth joints almost entirely yellow.

Abdomen.—Black, the first segment violaceous above.

Type.—University of Kansas.

Type locality.—Oak Creek Canon, Arizona, 6000 ft.

One specimen collected in August, by F. H. Snow.

CHALCIDOIDEA.

PTEROMALIDÆ.

Metapachia.

ENCYRTIDÆ.

Copidosoma gelechiæ Hwd.

One specimen, Oak Creek Canon, 6000 ft. (F. H. Snow).

PERILAMPIDÆ.

Perilampus cyaneus Brulle.

Two specimens, Oak Creek Canon, August, 1902 (F. H. Snow).

Perilampus hyalinus Say.

One specimen, Oak Creek Canon, August, 1902 (F. H. Snow).

Euperilampus opacus Ashm.

One specimen, Oak Creek Canon, 6000 ft., July (F. H. Snow).

CHALCIDIDÆ.

Stomatoceras.**Spilochalcis torvina** Cress.

One specimen, Oak Creek Canon, 6000 ft., August (F. H. Snow).

Chalcis ovata Say.

One specimen, Oak Creek Canon, 6000 ft., August (F. H. Snow).

Acanthochalcis argentimaculata Ashm.

One specimen, Bill William's Fork, August (F. H. Snow).

Leucospis affinis Say.

Two females, Oak Creek Canon, 6000 ft., July and August (F. H. Snow).

Leucospis bicincta n. sp.

Readily distinguished from all other American species by the pale citron-yellow almost whitish markings and the two bands on the abdomen, one being basal, the other in the middle.

♂.—5 mm.—Structure, sculpture and color pattern, with the exceptions mentioned as in *affinis*. Upper portions of front and occiput and vertex strongly green, scape and next succeeding joint black, the joint beyond this brown (remaining joints broken off), legs black, with the following parts concolorous with the other pale markings; tips of the femora, anterior and posterior tibiæ in front and middle tibiæ with the upper half in front, tarsi pale brown, claws dark brown, wings faintly infuscated, the nervures black or nearly.

Type.—University of Kansas.

Type locality.—Oak Creek Canon, 6000 ft., Arizona.

One specimen collected in July, by F. H. Snow.

CYNIPOIDEA.

FIGITIDÆ.

Eucoila impatiens Say.

One specimen, Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Figites coloradensis Ashm.

One specimen, Oak Creek Canon, 6000 ft., August (F. H. Snow).

PROCTOTRYPOIDEA.

SCELIONIDÆ.

Scelio venata Brues, sp. nov.

"*Female*.—Length 4.25 mm.—Black, the coxæ, legs and markings on abdomen reddish or rufous. Head coarsely rugose; the narrow central portion of the face directly above the antennæ somewhat elevated, the raised portion bounded on each side by carinæ which converge posteriorly. Scape, pedicel and first flagellar joint of antennæ fuscous, remainder of flagellum black; pedicel distinctly shorter than the first flagellar joint; second and third joints about equal, the third nearly twice as wide as long; club narrower than usual, the sixth flagellar joint widest, two and one-half times as wide as long. Mesonotum coarsely rugose with no indications of furrows. Scutellum and metanotum similarly sculptured, the posterior part of the latter coarsely longitudinally striated, its lateral angles rectangular, not prominent. First abdominal segment striated, but little wider than long, narrowed basally. Second segment two times as wide as long, the third large, a little wider than long; fourth a trifle shorter; entire surface of abdomen finely aciculated; the second, third and fourth segments each with a large basal spot of reddish brown. Legs rufous, the hind coxæ brownish basally. Wings brownish on apical half, the stigma small but very distinct, with a distinct oblique stigmal vein and a straight radial nervure which forms a long indistinct closed marginal cell."

"A single specimen from Bill William's Fork, Arizona, August, F. H. Snow."

"This species is closely related to *S. fuscipennis* Ashm., from which it is most easily distinguished by its pale coxæ, black tegulæ and spotted abdomen."

DIAPRIIDÆ.

Ceratopria sp.

Oak Creek Canon, Arizona, 6000 ft. (F. H. Snow).

VESPOIDEA.

MUTILLIDÆ.

Mutilla ægina Cress.

Oak Creek Canon, 6000 ft., July (F. H. Snow).

Mutilla (Timulla) vesta Cress.

Ft. Apache, August 26, 1897.

Mutilla hippodamia Fox.

Ft. Apache, August 26, 1897.

Mutilla (Dasymutilla) snoworum Ckll. and Fox.

Oak Creek Canon, 6000 ft., August (F. H. Snow).

Mutilla (Dasymutilla) sackenii Cress.

Female, Bill William's Fork, August (F. H. Snow); male, Congress Jc., July (F. H. Snow).

Mutilla quadriguttata Say.

Female, Ft. Apache, August 26, 1897. With only two yellow spots on the second abdominal segment.

Mutilla (Timulla) californica Rad.

Female, Oak Creek Canon, 6000 ft., July and August (F. H. Snow).

Mutilla (Timula) pacifica Cress.

Female, Bill William's Fork, August F. H. Snow.

Chyphotes attenuata Blake.

Ft. Apache, August 26, 1897.

TIPHIIDÆ.

Paratyphia albilabris Lep.

Ft. Apache, August 26, 1897.

SCOLIIDÆ.

Elis dives Prov.

Female, Bill William's Fork, August (F. H. Snow).

Elis plumipes Prov.

Female and male, Bill William's Fork, August (F. H. Snow).

Elis pilipes Sauss.

Male, August, 1902 (F. H. Snow).

Discolia hæmatodes Burn.

Two females, two males, Oak Creek Canon, 6000 ft., July and August (F. H. Snow); male, Bill William's Fork, August (F. H. Snow).

Discolia lecontei Cress.

Ft. Apache, August 26, 1897.

MYZINIDÆ.

Plesia frontalis Cress.

Male, Congress Jct., July (F. H. Snow); Bill William's Fork, August (F. H. Snow).

CHRYSIDIDÆ.

Notozus marginatus Patt

Oak Creek Canon, 6000 ft., August F. H. Snow.

Holopyga horus Aar.

Oak Creek Canon, 6000 ft., July (F. H. Snow).

Tetrachrysis cæruleus Fabr.

Oak Creek Canon, August, 1902 (F. H. Snow).

Tetrachrysis lauta Cress.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Tetrachrysis tripartita Aar.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Parnopes westcottii Mel. and Brues.

Bill William's Fork, August (F. H. Snow).

EUMENIDÆ.

Eumenes bollii Cress.

Oak Creek Canon, 6000 ft., July (F. H. Snow).

Ancistrocerus birenimaculatus Sauss.

Female and male, Humphrey's Peak, at base, 9500 ft., August (F. H. Snow).

Ancistrocerus bustamenti Sauss.

Two females, S. Arizona, August, 1902 (F. H. Snow).

One specimen (246) has the clypeus rather bidentate, and the postscutellum with a transverse yellow band. In other respects it agrees with the description of the species. In the other specimen (247) the yellow is entirely absent from the postscutellum.

Ancistrocerus tuberculiceps Sauss.

Oak Creek Canon, 6000 ft., July and August (F. H. Snow).

Odynerus annulatus Say.

Oak Creek Creek, 6000 ft., July and August (F. H. Snow); Flagstaff, August, 1902 (F. H. Snow).

Odynerus hidalgi Sauss. var.

Oak Creek Canon, August, 1902 (F. H. Snow).

Odynerus iturbidi Sauss.

Oak Creek Canon, August, 1902 (F. H. Snow).

Odynerus toltecus Sauss.

Oak Creek Canon August, 1902 (F. H. Snow); Bill William's Fork, August (F. H. Snow).

Odynerus taos Cress.

Oak Creek Canon, 6000 ft., July (F. H. Snow); Congress Jc., July (F. H. Snow).

Odynerus anormis Say.

Oak Creek Canon, 6000 ft., July (F. H. Snow).

VESPIDÆ.

Polybia flavitarsis Sauss.

Oak Creek Canon, 6000 ft., August (F. H. Snow).

One ♀ with the subtegular and metathoracic pale marks indicated by dark brown, another with these marks entirely wanting. There are at least three types of coloration in this species representing, perhaps, as many races, of which the dark form is apparently one.

Polistes flavus Cress.

Bill William's Fork, August (F. H. Snow).

Polistes aurifer Sauss.

Oak Creek Canon, August, 1902 (F. H. Snow).

Polistes texanus Cress.

Bill William's Fork, August, 1902 (F. H. Snow).

CEROPALIDÆ.

Pepsis cinnabarida Lucos.

Oak Creek Canon, August, 1902 (F. H. Snow).

Pepsis chrysothemis Lucas.

Congress Jc., July (F. H. Snow).

Pepsis boguei Fox.

Oak Creek Canon, 6000 ft. July (F. H. Snow).

Ceropales fraterna Say.

Oak Creek Canon, 6000 ft. July (F. H. Snow).

Cryptocheilus (Hemipogonius) conicus Say.

Oak Creek Canon, August, 1902 (F. H. Snow).

With the first recurrent nervure received a little before the middle of the second submarginal cell.

Pedinaspis planatus Fox.

Congress Jc., July (F. H. Snow).

Anoplius (Ferreoia) subviolaceus Cress.

Bill William's Fork, August (F. H. Snow).

Anoplius (Pompilius) fulgidus Cress.

Bill William's Fork, August (F. H. Snow).

Anoplius (Entypus) marginatus Say.

Bill William's Fork, August (F. H. Snow).

Anoplius (Batozonus) algidus Sm.

Oak Creek Canon, 6000 ft., July and August (F. H. Snow).

Race ? with the face almost entirely, posterior margin of pronotum, tibiae, tarsi, scutellum to a great extent, postscutellum, meta-thoracic angles, abdominal segments behind the second more or less, yellow.

Anoplius (Pompilius) apiculatus Sm.

Bill William's Fork, August (F. H. Snow).

Melanaporus dubius (Fox).

Male, Oak Creek Canon, 6000 ft., July and August (F. H. Snow).

SPHECOIDEA.

SPHECIDÆ.

The Sphecidae here listed were determined by Dr. H. T. Fernald.

Sphex lucæ Sauss.

Oak Creek Canon, August, 1902 (F. H. Snow).

Sphex ashmeadii Fern.

Congress Jc., July (F. H. Snow); Bill William's Fork, August (F. H. Snow).

Parasphex ferruginosus Fox.

Congress Jc., July (F. H. Snow); Bill William's Fork, August (F. H. Snow).

Priononyx striatus Sm.

Bill William's Fork, August (F. H. Snow).

NYSSONIDÆ.

Gorytes costalis Cress.

Oak Creek Canon, 6000 ft., July (F. H. Snow).

Gorytes spilopterus Hdl.

Congress Jc., July (F. H. Snow); Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

Gorytes eximius Prov.

Bill William's Fork, August (F. H. Snow).

Gorytes bipunctatus Say.

Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

TRYPOXYLONIDÆ.

Trypoxylon arizonensis Fox.

Bill William's Fork, August (F. H. Snow).

Male very like the ♀ and has a spine on the posterior trochanter.

PHILANTHIDÆ.

Eucerceris rubripes Cress.

Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

Eucerceris unicornis Patt.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Cerceris nasica Vier. and Ckll.

Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

Cerceris sexta Say.

Humphrey's Peak, August, 1902 (Snow).

Cerceris biungulata Cress.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Cerceris platyrhina Vier. and Ckll.

August, 1902 (F. H. Snow).

Specimen No. 151, ♂, has the following characters worthy of mention: clypeus anteriorly with four short, acute, rather tuberculate, equidistant projections. Enclosure of the metathorax rather coarsely striate. Pygidial area oblong, shining, closely coarsely punctured, a short spine just beneath and on a line with the lateral margin. Color almost exactly as in the female; middle and posterior trochanters and posterior coxæ partly yellow; posterior femora with the basal third yellow.

Cerceris macrosticta Vier. and Ckll.

Oak Creek Canon, 6000 ft., Aug., 1902 (F. H. Snow).

Cerceris ferruginior Vier. and Ckll.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow); Bill William's Fork, August (F. H. Snow).

Cerceris femur-rubrum Vier. and Ckll.

Congress Jc., July (F. H. Snow).

Cerceris fasciola Cress.

Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

Cerceris rinconis Vier. and Ckll.

Bill William's Fork, August (F. H. Snow).

Cerceris acanthophilus Vier. and Ckll.

Congress Jc., July (F. H. Snow); Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

Aphilanthops quadrinotatus Ashm.

Flagstaff, August, 1902 (F. H. Snow).

Aphilanthops taurulus Ckll.

Congress Jc., July (F. H. Snow).

Philanthus crabroniformis Sm.

Congress Jc., July (F. H. Snow); Oak Creek Canon, 6000 ft., August, 1902, July (F. H. Snow).

Philanthus punctatus cockerelli Dunn.

Oak Creek Canon, 6000 ft., July, August (F. H. Snow).

LARRIDÆ.

Plenoculus propinquus Fox.

Oak Creek Canon, 6000 ft., August (F. H. Snow).

Notogonia nigripennis occidentalis Vier.

Bill William's Fork, August (F. H. Snow).

Tachytes obucurru Cress.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Tachytes spatulatus Fox.

Oak Creek Canon, 6000 ft. July (F. H. Snow).

Tachysphex propinquus Vier.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

BEMBECIDÆ.

Stizus godmani Cam.

Bill William's Fork, August (F. H. Snow); Oak Creek Canon, August, 1902 (F. H. Snow).

Bembex sayi Cress.

Oak Creek Canon, August, 1902 (F. H. Snow); Bill William's Fork, August (F. H. Snow); Congress Jc., July (F. H. Snow).

Bembex troglodytes Hdl.

Oak Creek Canon, 6000 ft., Aug. (F. H. Snow); Bill William's Fork, August (F. H. Snow).

Bembex nubilipennis Cress.

Oak Creek Canon, 6000 ft. July (F. H. Snow).

Stictia pictifrons Sm.

Oak Creek Canon, 6000 ft., Aug., 1902 (F. H. Snow).

PEMPHREDONIDÆ.

Mimesa punctatus Fox.

Oak Creek Canon, 6000 ft., July and August (F. H. Snow).

Pemphredon inornatus Say.

Oak Creek Canon, 6000 ft., August, 1902 (F. H. Snow).

Stigmus inordinatus Fox.

Oak Creek Canon, 6000 ft., August (F. H. Snow).

CRABRONIDÆ.

Crabro decemmaculatus Say.

Oak Creek Canon, August, 1902 (F. H. Snow).

Crabro packardii Cress.

Oak Creek Canon, August, 1902 (F. H. Snow).

Crabro odyneroides Cress.

Oak Creek Canon, August, 1902 (F. H. Snow).

Crabro imbutis Fox.

Oak Creek Canon, August, 1902 (F. H. Snow).

Crabro chrysarginus Lep. and Brulle.

Oak Creek Canon, August, 1902, July (F. H. Snow).

Crabro dilectus Cress.

Oak Creek Canon, August, 1902 (F. H. Snow).

Crabro interruptus Lep. and Brulle.

Oak Creek Canon, August, 1902 (F. H. Snow).

OXYBELIDÆ.

Oxybelus cornutus Say.

Oak Creek Canon, Aug., 1902, July (F. H. Snow).

Notoglossa emarginata Say.

Oak Creek Canon, Aug., 1902, July (F. H. Snow).

APOIDEA.

HALICTIDÆ.

Prateraner ranunculi Rob.

Oak Creek Canon, Aug., 1902 (F. H. Snow).

NOMIIDÆ.

Nomia foxii D. T.

Oak Creek Canon, Aug., 1902, July (F. H. Snow).

PANURGIDÆ.

Rhophitoides fimbriatus Cress.

Humphrey's Peak at base, 9500 ft., August (F. H. Snow).

Halictoides oryx Vier.

Oak Creek Canon, August, 1902 (F. H. Snow).

Pseudopanurgus rugosus Robt.

Oak Creek Canon, Aug., 1902 (F. H. Snow).

Panurginus innuptus Ckll.

Oak Creek Canon, July (F. H. Snow).

Panurginus perlævis Ckll.

Oak Creek Canon, Aug. (F. H. Snow).

MELECTIDÆ.

Nomada (Cephen) texana Cress.

Oak Creek Canon, 6000 ft., Aug., 1902, July (F. H. Snow).

Ericrocis lata Cress.

Bill William's Fork, August (F. H. Snow).

Melecta interrupta Cress.

Oak Creek Canon, 6000 ft., July, August (F. H. Snow).

Triepeolus verbesinæ Ckll.

Bill William's Fork, August (F. H. Snow).

ANTHOPHORIDÆ.

Anthophora (Amegilla) californica Cress.

Oak Creek Canon, August, 1902, July (F. H. Snow).

Anthophora (Amegilla) cleomis Ckll.

Oak Creek Canon, August, 1902, July (F. H. Snow).

Anthophora urbana Cress.

Oak Creek Canon, August, 1902, July (F. H. Snow).

Centris rhodopus Ckll.

Bill William's Fork, August (F. H. Snow).

Clisodon terminalis Cress.

Oak Creek Canon, July (F. H. Snow).

Melissodes tristis Ckll.

Oak Creek Canon, July, August (F. H. Snow).

Melissodes grindeliæ Ckll.

Oak Creek Canon, July, August (F. H. Snow).

Melissodes gilensis Ckll.

Oak Creek Canon, August, 1902 (F. H. Snow).

PROSOPIDÆ.

Prosopis ruidosensis Ckll.

Oak Creek Canon, August, 1902 (F. H. Snow).

BOMBIDÆ.

Bombus dorsalis Cress.

Oak Creek Canon, July, August, (F. H. Snow).

Bombus pennsylvanicus D. G.

Oak Creek Canon, August, (F. H. Snow).

Bombus prunellæ Ckll.

Oak Creek Canon, August, 1902 (F. H. Snow).

Bombus howardi Ckll.

Humphrey's Peak, at base, 9500 ft., August (F. H. Snow).

Psithyrus insularis Sm.

Oak Creek Canon, August, 1902 (F. H. Snow).

NEW MEXICO.

VESPOIDEA.

MUTILLIDÆ.

Mutilla (Timulla ?) montivaga Cress.

Female, Albuquerque, Aug. (Snow).

Mutilla (Euspinolia ?) oceola Blake.

Male, Magdalena.

Mutilla (Dasymutilla) comanche Blake.

Magdalena Mts., July, 1894 (Snow).

Mutilla (Dasymutilla) snoworum Ckll. and Fox.

Albuquerque, Aug., 1894 (Snow).

Mutilla (Timulla) californica Rad.

Female, Magdalena, July, 1894 (Snow).

Mutilla (Photopsis ?) fulvohirta Cress.

Albuquerque, Aug., 1894 (Snow).

EUMENIDÆ.

Ancistrocerus tuberculiceps Sauss.

Magdalena Mts., July, 1894 (Snow).

Odynerus annulatus Say.

Albuquerque, Magdalena Mts., July, 1894 (Snow).

Odynerus leucomelas Sauss.

Magdalena Mts., July, 1894 (Snow).

Odynerus arvensis Sauss.

Magdalena Mts., July, 1894 (Snow).

Odynerus anormis Say.

Magdalena Mts., July, 1894 (Snow).

CEROPALIDÆ.

Pepsis pallidolimbata Lucas.

Magdalena Mts., Aug., 1894 (Snow).

Anoplius (Sophropompilus) relativus Fox.

Albuquerque, Aug., 1894 (Snow).

Anoplius (Entypus) marginatus Say.

Albuquerque, Aug., 1894 (Snow).

SPHECOIDEA.

PHILANTHIDÆ.

Cerceris nasica Vier. and Ckll.

Near Las Vegas Hot Springs, Sept. (Snow).

Cerceris platyrhina Vier. and Ckll.

Magdalena Mts., July, 1894 (Snow).

Philanthus sanbornii Cress.

Magdalena Mts., July, 1894 (Snow).

BEMBECIDÆ.

Bembex pruinosa Fox.

Magdalena Mts., Aug., 1894 (Snow).

Stictia carolina Fabr.

Magdalena Mts., July, 1894 (Snow).

PEMPHREDONIDÆ.

Pemphredon inornatus Say.

Magdalena Mts., July, 1894 (Snow).

CRABRONIDÆ.

Crabro nigrifrons Cress.

Near Las Vegas Hot Springs, Sept. (Snow).

APOIDEA.

PANURGIDÆ.

Halictoides halictulus Cress.

Near Las Vegas Hot Springs, Sept. (Snow).

Panurginus innuptus Ckll.

Magdalena Mts., Aug., 1894 (Snow).

ANTHOPHORIDÆ.

Melissodes tristis Ckll.

Magdalena Mts., Aug., 1894 (Snow).

BOMBIDÆ.

Bombias auricomus Robt.

Magdalena Mts., July, 1894 (Snow).

Bombus appositus Cress.

Magdalena Mts., July, 1894 (Snow).

Bombus virginicus Oliv.

Magdalena Mts., July, 1894 (Snow).

Psithyrus insularis Sm.

Magdalena Mts., July, 1894 (Snow).

COLORADO.
VESPOIDEA.
MUTILLIDÆ.

Mutilla creusa Cress.

Females, Colorado Springs, 5915 ft., Aug. (E. S. Tucker).

Mutilla (Timulla) californica Rad.

Female, Colorado Springs, 5915 ft., Aug. (E. S. Tucker).

Mutilla pacifica Cress.

Female, Estes Park, Aug., 1902 (F. H. Snow).

CHRYSIDIDÆ.

Tetrachrysis propria Aar.

Manitou Park, Aug. (F. H. Snow, U. of K., lot 159).

EUMENIDÆ.

Ancistrocerus tuberculiceps Sauss.

Male (Snow).

VESPIDÆ.

Vespa occidentalis Cress.

Manitou Park, Aug. (F. H. Snow, U. of K., lot 159).

Vespa diabolica Sauss.

Manitou Park, Aug. (F. H. Snow, U. of K., lot 159).

CEROPALIDÆ.

Anoplius (Sophropompilus) relativus Fox.

Manitou Park (F. H. Snow, U. of K., lot 236); Manitou, 6620 ft., Aug. (E. S. Tucker).

Anoplius (Ferreola) ingenuus Cress.

Colorado Springs, 5915 ft., Aug. (E. S. Tucker).

SPHECOIDEA.

LARRIDÆ.

Tachytes rufofasciatus Cress.

La Mar (Snow).

CRABRONIDÆ.

Crabro chrysarginus Lep. & Brulle.

APOIDEA.

HALICTIDÆ.

Sphecodium pycnanthemum Rob.

Bailey, Aug., 1890.

PANURGIDÆ.

Panurginus innuptus Ckll.

(Snow.)

Panurginus bakeri Ckll.

Manitou Park, Aug. (F. H. Snow, U. of K., lot 159).

MELECTIDÆ.

Nomada (Holonomada) vineta Say.

Manitou Park (F. H. Snow).

ANTHOPHORIDÆ.

Synhalonia crenulaticornis Ckll.

Manitou Park, Aug. (U. of K., lot 159, F. H. Snow).

BOMBIDÆ.

Bombus oppositus Cress.

Manitou Park (F. H. Snow); Estes Park, Aug., 1892 (F. H. Snow).

Psithyrus insularis Sm.

Manitou Park (F. H. (Snow)).

ALASKA.

APOIDEA.

Bombus melanopygus Nyl.

(L. L. Dyche).

WYOMING.

ICHNEUMONIDÆ.

Campoplex wyomingensis n. sp.Colored very like *C. scularius* Prov., but much larger.

♂.—*Head*.—Anterior aspect dull, very closely punctulately sculptured, the clypeus almost appearing granular, space between the eyes at base about equal to the length of an eye, malar space about as high as the pedicellum is long; antennæ fifty-nine jointed and black, the scape and pedicellum together about as long as the first joint of the flagellum; head black, the mandibles yellow-black at apex.

Thorax.—Black, excepting the tegulæ which are yellow; nearly all of the posterior face occupied by a very broad longitudinal depression, the middle of which is rather transversely striate, the sides rugulose, the external area almost completely defined, the internal area well defined by distinct carinæ, the metanotum chiefly granular; wings with very dark brown nervures, the stigma in part paler, areola forming a trapezium that is petiolate, the petiole about one-half as long as the shortest side; anterior legs yellow, excepting the coxæ which, except at apex, are black, the trochanters have some brown on them beneath, and the femora are brown beneath, claws and onychia brown, middle legs colored like the anterior pair, posterior legs black, excepting the basal two-thirds of the tibiæ, which are yellow, all tibial spurs testaceous or yellowish testaceous.

Abdomen.—Ferruginous in greater part, petiole black; second segment black, except for an indistinct subapical band of ferruginous that extends anteriorly on the sides, third segment with a black spot at base, the succeeding segments with a median black mark that does not extend down on the sides.

Type.—University of Kansas.

Type locality.—Near Lander, Wyoming, Aug., Roy Moodie.

One specimen, no further data.

Anomalon semirufum Nort.

One ♀, 16 mm. long, with no raised lines on the convex metanotum, which bears a large black spot that occupies nearly all of its surface. Taken near Lander, Wyoming. Apparently belongs to Kriechbaumer's genus *Acanthostoma*, as given in Ashmead's Classification of the Ichneumon flies.

Pimpla landerensis n. sp.

In maculation very like *P. inquisitor*, from which it is readily distinguished by the structure and white of anterior and middle legs.

♀.—10 mm.—*Head*.—Black and polished, clypeus with a white spot on each side, scape black, about as long as the second joint of the flagellum, flagellum brown above, from rather whitish to pale brown to brown beneath, antennæ thirty jointed, palpi white.

Thorax.—Very like the head, except on the superior aspect and on the sides of the metanotum, where punctures occur, parallel carinæ also traverse the superior aspect of the metathorax longitudinally; thorax black, excepting the tubercles and a line prolonged anteriorly therefrom, tegulæ, a line beneath the same, posterior margin of the scutellum and a line on the postscutellum, which are white; wings hyaline, nervures dark brown, except at the base of the wing, where they are colorless, stigma pale brown, anterior and posterior corner whitish, the lower margin testaceous, areolet just sessile and forming a trapezium; anterior coxæ brownish and whitish, middle and posterior coxæ ferruginous, trochanters almost uniformly whitish, the middle and posterior proximal pairs partly testaceous,

femora more or less ferruginous, the anterior pair testaceous in front, whitish at apex, like the middle pair, posterior pair with a subapical blackish band, anterior and middle tibiæ and tarsi chiefly whitish, the middle tarsi tipped with dark brown, middle third of posterior tibiæ and the base whitish, otherwise dark brown, the posterior tarsal joints with the basal half whitish, the apical half dark brown.

Abdomen.—Black, ovipositor colorless, tipped with brown about half the length of the abdomen, first abdominal segment with a smooth polished anterior face, bounded by carinæ laterally, no longitudinal carinæ on disc, abdominal segments closely punctured with a shallow furrow near the smooth apical margin.

Type.—University of Kansas.

Type locality.—Near Lander, Wyoming, August, Roy Moodie.

One ♀, with no further data.

CHALCIDOIDEA.

PTEROMALIDÆ.

Platyterma citripes Ashm.

One ♂, Lusk, July, '95 (U. of K., lot 410).

CHALCIDIDÆ.

Chalcis tegularis Cress.

One specimen, Aug., 1895. No further data.

VESPOIDEA.

MUTILLIDÆ.

Mutilla caneo Blake.

Thirty miles north of Lusk, July, 1895 (U. of K., lot 472).

Mutilla (Timulla) californica Rad.

Thirty miles north of Lusk, July, 1895 (U. of K., lot 423).

CHRYSIDIDÆ.

Chrysis cæruleus Fabr.

Twelve miles northwest of Lusk, July, 1895 (U. of K., lot 428).

EUMENIDÆ.

Odynerus anormis Say.

Near Lander.

VESPIDÆ.

Polistes variatus Cress.

Near Lander.

CEROPALIDÆ.

Cryptocheilus (Hemipogonius) conicus Say.

Near Lander.

Anoplius (Ferreoia) subviolaceus Cress.

Forty miles north of Lusk, July, 1895 (U. of K., lot 415, lot 420).

SPHECOIDEA.

LARRIDÆ.

Tachytes spatulatus Fox.

Laramie Mts., Aug., 1895 (U. of K., lot 439).

BEMBECIDÆ.

Bembex amœna Hdl.

Near Lander.

APOIDEA.

BOMBIDÆ.

Bombus ternarius Say.

Near Lander.

ILLINOIS.

CHALCIDOIDEA.

CHALCIDIDÆ.

Chalcis ovata Say.

Champaign (W. A. Snow; U. of K., lot 344, sub. 3).

TORYMIDÆ.

Torymus.**Syntomaspis.**

VESPOIDEA.

CHRYSIDIDÆ.

Chrysis (Tetrachrysis) nitidula Fabr.

S. Ill., May 16, 1891.

PENNSYLVANIA.

ICHNEUMONOIDEA.

ICHNEUMONIDÆ.

Ichneumon flavofacialis n. sp.

Comes nearest to the species in the group formed by *S. maurus*, *S. cincticornis*, *S. germanus* and *S. viola*, but is readily separated by its maculation and especially its entirely black antennæ. Also related to *S. odiosus*, which has hyaline wings.

♂.—17 mm.—*Face* with adjoining and almost adjoining punctures; clypeus with sparse punctures; malar space about as high as the scape is broad at apex; antennæ over forty jointed (tip broken off), the scape and pedicellum together a little longer than the first joint of the flagellum, about as long as the combined length of the second and third joints of the flagellum.

Head, thorax and abdomen more or less closely punctured all over; basal area of metathorax distinctly defined by raised lines, the areola broader than long, subquadrate, the posterior boundary curved in or slightly emarginate, areola rugose, petiolarea rugulose, nearly parallel sided and occupying about two-thirds the length of the metathorax, external area separated from the external median area by a rather inconspicuous raised line, the latter area separated from the internal area by a very strong raised line, these lateral areas rather rugose, angular area apparently not represented, the spiracular and middle pleural areas rugose, partly separated by a rather indistinct raised line joining the spiracle with the pleural carina; areolet of the wings pentangular, the radial side of the polygon being as long as the external cubital side, the other sides subequal.

Almost entirely black; the wings distinctly smoky, with the nervures almost black, and the stigma brownish testaceous; the following parts almost completely yellow; scape in front, face beneath insertion of antennæ, apices of anterior and middle coxæ, proximal trochanters of anterior and middle legs at base and apex, proximal trochanters of posterior legs at apex, all distal trochanters, anterior and middle femora in front on the apical half partly; the second, third and fourth ventral abdominal segments brown.

Type.—University of Kansas.

Type locality.—Allegheny Co., Pennsylvania.

One ♂ collected by H. G. Klages.

CHALCIDOIDEA.

EULOPHIDÆ.

Closterocerus tricinatus Ashm., MS.

One ♀, "Penn."

EURYTOMIDÆ.

Decatoma varians Walsh.

One ♀ specimen, Jeannette (H. G. Klages).

CHALCIDIDÆ.

Phasgonophora sulcata Westw.

Two specimens (♀, ♂). No further data.

TORYMIDÆ.

Ormyrus brunneipes Prov.

One specimen. Penn. No further data.

Differs from the description of the type in having the scape all dark.

MISSOURI.

VESPOIDEA.

Mutilla hippodamia Fox.

Female, Kansas City (F. Rogers).

Mutilla sparsa Fox.

Female, Kansas City (F. Rogers).

Mutilla cypris Blake.

Female, Kansas City, (F. Rogers).

Mutilla scæva Blake.

Male, Kansas City (F. Rogers).

Mutilla ornativentris Cress.

Kansas City, July 10th, Aug. 17th (F. Rogers).

FLORIDA.

VESPOIDEA.

Mutilla (Timulla) californica Rad.

CALIFORNIA.

VESPOIDEA.

Mutilla (Dasymutilla) sackenii Cress.

Male, July (U. of K., lot 714, F. H. Snow).

Mutilla (Timulla) pacifica Cress.

Female.

Parnopes edwardsii Cress.

July (F. H. Snow, U. of K., lot 714).

Bembex amœna Hal.

July (F. H. Snow, U. of K., lot 714).

Stictia usitata Fox.

July (F. H. Snow, U. of K., lot 714).